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POTENTIAL HEATING OIL SHORTAGES

HEARINGS

BEFORE THE

SUBCOMMITTEE ON CONSUMER ECONOMICS

OF THE

JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

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POTENTIAL HEATING OIL SHORTAGES

TUESDAY, SEPTEMBER 18, 1973

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON CONSUMER ECONOMICS
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:35 a.m., in room S-407, the Capitol Building, Hon. Hubert H. Humphrey (chairman of the subcommittee) presiding.

Present: Senator Humphrey and Representative Carey.

Also present: William A. Cox and Sarah Jackson, professional staff members; Michael J. Runde, administrative assistant; Leslie J. Bander, minority economist; George D. Krumbhaar, Jr., minority counsel; and Walter B. Laessig, minority counsel.

OPENING STATEMENT OF CHAIRMAN HUMPHREY

Chairman HUMPHREY. May I say to our witness that due to a rather late change of schedule, I found that this morning I had to have a half hour with some members of the Foreign Relations Committee which did not permit me to be here at the time that I would have liked. We had a rather important assignment over there today on a couple of matters. So if you will bear with us, and thank you for your patience, Mr. Ligon.

Our first witness is Mr. Ligon of the Department of the Interior, Office of Gas and Oil.

I have an opening statement that I would like to read in order to set the framework of the series of hearings that we will have in the Consumer Economics Subcommittee.

I want to express publicly my thanks for your cooperation in the position that you hold. You have been very helpful to Members of Congress and gone out of your way to respond to our requests.

We are here this morning to address an urgent question. That is: How can we assure that there will be enough fuel oil and propane to see us through these coming winter months; and how can we get this fuel to the places and the people who need it most? It is abundantly clear that fuel supplies will be very tight unless we have an unusally mild winter. And I would go so far as to say that even with a mild winter, the supply situation will be tight.

The problem stems basically from the fact that both crude oil output and refining capacity in the United States have been virtually static for several years while demand has grown. The demand has grown exceptionally fast for clean-burning fuels such as distillate

oils (which include home heating oil and diesel). The same demand-supply squeeze is true, even more so, for natural gas and propane. Therefore, we depend more and more heavily on imports—not only for crude oil but also for the already refined products.

The crude oil exporting countries, however, may not see fit to expand output to the full extent of our needs, and even the suppliers of our rapidly rising imports of heating oil—mainly Western Europe—may not be able to meet all of our needs. Then, I think we also have to consider the fact that the refinery capacity is being used prettty much to full capacity.

In any case Europe cannot provide all the low-sulfur fuel oil that we want.

So we face a clear possibility of heating oil shortages on a national scale this winter, and we already have a very serious situation regarding propane. Moreover, faulty allocation of supplies among regions and customers through the actions of many private firms without coordination is almost certain to cause additional unnecessary local hardship. Producers and distributors, in fact, already are reluctant to make firm commitments to customers, because they do not know how much fuel will be needed for heat or where supplies may be required on an emergency basis.

A study done by the staff of the Joint Economic Committee at my request has concluded that if next winter is mildly colder, colder than average, this would bring on national shortages by early February which could be averted only by importing an additional 9 million barrels of heating oil. This sort of weather occurs about 4 winters in 10. A harsh winter with average temperatures that occur about 2 years in 10 would bring very severe shortages beginning in January and reaching 15 percent nationwide in March. If we should have import disruptions or any major refinery breakdown in addition to this, then shortages could turn into a national disaster.

Now, I know that that sounds rather extreme but it is my judgment as a Senator and chairman of this subcommittee that we have to look ahead to the possibilities that might prevail. Last year no one could have predicted that we would have a mild winter and, as you know, I have said many times that in the State of Minnesota, for example, we were within a week of being out of fuel oil. In fact, we would have been out except for the fact that the Governor took emergency steps, ordered a number of tank trucks to go into Alberta, Canada, and from Regina, Canada, brought back large amounts of fuel oil at very high cost to fulfill the needs of a State that was within 2 to 3 days of being without fuel oil in the middle of the winter.

I cannot impress upon this city of Washington, D.C., what a winter in the Upper Midwest is like without heat. And we have to look to that possibility this year. If we get normal winter weather conditions we could be in a serious situation and if we got a little above normal weather conditions; that is, a little colder than the average of our winters, we could be in very serious condition.

Many of our schools, for example, have no contracts to date for fuel oil. They are living hand to mouth. They are hopeful that they are going to get supplies—many schools are putting in larger tanks for reserves and trying to fill those tanks.

Now, the areas that are most seriously affected by any type of shortage are the New England States, the Upper Midwest States and the Mid-Atlantic States.

What perplexes me most about this menacing situation is that the Government has not done a great deal to prepare for it. In anticipation of such difficulties, the Congress—in April—empowered the President to control the allocation and use of petroleum fuels, including propane. Thus, the Government could be exercising much more influence to improve the situation.

Now, I know that an allocation program does not provide you with more fuel. There is only so much that comes out of each barrel of crude. But it does provide a way of giving equitable distribution and, in some areas, priority consideration.

The refusal of the administration to do anything about propane, Mr. Ligon, could be a catastrophe in my part of the country. I was home in Minnesota during the month of August, as you know, and I traveled a great deal around the State and we simply must have the propane. It is not a question of whether we ought to have it. We have to have it. And if we do not get it, the corn crop that the Department of Agriculture is talking about is theoretical, not practical.

We dry 85 percent of all the corn produced in the State of Minnesota by propane. We simply have got to have it. We have to have it for the production of turkeys which is a form of protein and we are the largest producer in the Nation. We simply have to have it. And I cannot for the life of me see why there is any delay when everybody knows, and the record is replete with evidence, that there is a critical shortage of propane in the Upper Midwest areas and that is part of the breadbasket of America.

In June the Senate passed legislation requiring the President to impose mandatory petroleum allocation, but this bill still is pending in the other body. And we will hear from my friend from New York, Congressman Carey, on that.

In the meantime, the White House announced recently that it would not use the powers that it already has.

So September is now upon us, and we have no serious attempt to cope with this problem. Now we see something approaching panic among many fuel users and great apprehension in the public at large, especially in what I called the shortage-prone areas. Farmers are worried about processing their crops and getting them to market; truckers are deeply concerned about getting them to market; truckers are deeply concerned about getting fuel to continue urgent operations; electric utilities are pleading for mandatory allocations; school boards are still without fuel contracts for the winter; New England in general has a large deficit in heating fuel and Senator Ribicoff has been giving special attention to this matter.

Authorities in the Upper Midwest foresee a very sizable shortage. The civil defense director in the State of Minnesota has brought this to our attention. Even many oil companies want mandatory Government controls.

The President's Energy Policy Office has designed programs in response to these needs but continues to avoid implementing them. Instead it proposes measures such as relaxing our hard-won standards on emission of fuel pollutants into the air.

This is the first of 2 days of hearings this week on this matter at which we hope to shed some light on the working of present fuel policies and the need for prompt changes in some of them to cope with this dangerous situation. The second day is on Thursday and will take place at the same time but in room 4202 of the Dirksen Senate Office Building—the Public Works Committee hearing room.

At this time we welcome this morning's witnesses and thank them for accommodating the last-minute change in scheduling that we had to make. The reason for that was that tomorrow we are marking up the school lunch bill in the Committee on Agriculture and I am one of the proponents. It is my bill before that committee.

Let me now ask the two administration witnesses to proceed with their testimony. First, we shall hear from Mr. Duke R. Ligon, the Director of the Office of Oil and Gas, and I again want to thank you for your splendid service. And we shall hear from Mr. John R. Quarles, Jr., the Deputy Administrator of the Environmental Protection Agency.

We are here to get information. It does not do any good to scold. I think we have brought to the attention of the proper officials in Government the needs. I hope that you might give us some information on the situation. The people that I am privileged to represent are really desperate in this situation.

Please proceed, Mr. Ligon.

STATEMENT OF HON. DUKE R. LIGON, DIRECTOR, OFFICE OF OIL AND GAS, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY LISLE REED, STAFF MEMBER

Mr. LIGON. Thank you, Senator Humphrey. It is a sincere pleasure to appear before you and your subcommittee today, and likewise I certainly have enjoyed working with you and your staff, as well as other interested Congressmen and Senators. I think that we all share your concern for this problem that we have in the Nation today.

I am glad to be before you today to discuss matters relating to the fuel situation for the coming heating season. My comments, Mr. Chairman, are divided into three general categories.

The first is the outlook for distillate fuels. The second, a brief report on the programs recently proposed concerning priority use of low-sulfur fuels and the propane allocation program. And third, the current operation of the voluntary petroleum allocation program.

First, the outlook for distillate fuels for the coming heating season.

Distillate fuel oil, as you know, Mr. Chairman, is the general classification for products known as heating oils, normally used in heating homes, and light diesel fuels. To estimate the potential problem with distillate fuel oil requires a careful assessment of domestic and foreign supply and demand of distillate. However, no fuel can be analyzed in isolation. We must also consider our supply and demand balances for gasoline as well as the forecasts for all other fuels, including natural gas and coal.

The growth in demand for distillate fuel oil is influenced by several fundamental items. The three most important factors are the growth in residential and commercial heating, use in utility boilers and turbines, and increased consumption of diesel fuel for highway use.

Chairman HUMPHREY. Might we just pause for technical information there. The fuels are listed as fuel oil No. 2. That is generally what we use for home heating; is that correct?

Mr. LIGON. Yes, sir; that is correct.

Chairman HUMPHREY. No. 6 is used in utilities primarily?

Mr. LIGON. That is correct.

Chairman HUMPHREY. And how do we term the diesel?

Mr. LIGON. Just as a diesel fuel.

Chairman HUMPHREY. Just as diesel fuel.

Mr. LIGON. Yes, sir. Generally, it is safe to say that some of the utilities also use a No. 4 distillate as well as the No. 6.

Chairman HUMPHREY. What are the differences there?

Mr. LIGON. It is the weight of the particular product coming from the refining process, Senator Humphrey.

Representative CAREY. And the Btu's as well, right?

Mr. LIGON. Yes, sir; right.

Chairman HUMPHREY. Go ahead, sir.

Mr. LIGON. While distillate demand for all uses increased about 3 percent a year during the 1960's, its use has increased by 7.2 percent per year over the past 2 years. The accelerating growth rate can be attributed primarily to the substitution of distillates for natural gas. We estimate that the demand for distillate fuel oil for this coming season will increase by 10.4 percent over last season.

I do not want to diverge too far from the topic at hand, but many problems have arisen from a lack of domestic natural gas exploration and development and this inadequacy of supply, along with some of the present demand for natural gas, was artificially created by a regulatory system which inhibited the free enterprise system. The President has proposed legislation for the deregulation of new natural gas production. Hearings by appropriate committees of the House and Senate will soon commence on the matter. I urge all of you as Members of Congress to act responsively and swiftly on this most important piece of legislation.

Chairman HUMPHREY. Might I interject, I do not think we ought to let the gas companies off entirely here. They advertise a great deal about use of gas. Despite all of the regulatory rules there are supposed to be denying them regulation and profits, et cetera, I notice the gas company in our State, which is an excellent company, does not hesitate to tell people to use gas. Minigas Co. just goes great guns.

Mr. LIGON. That is right. And we agree with your staff without a doubt that conservation and prohibition of this type of encouragement by the use of the gas companies is very important as far as any chances we have this winter of getting through without serious difficulties and shortages.

Chairman HUMPHREY. For the immediate period.

Mr. LIGON. Yes, sir. The immediate period.

The blending and direct burning of distillate to meet certain environmental standards has been another factor causing an increase in demand for distallate fuel oil. Contrary to the artificial and somewhat ridiculous situation created by the regulation of the price of natural gas at the wellhead, the use of distillates for blending into residual fuel oil and for direct burning is not arbitrary. Such actions are necessary if fuels to meet present environmental standards are to be man-

ufactured or processed, given the limited amount of low sulfur crude oil and desulfurization capacity in the world.

Thus, on the demand side of the picture for distillate fuel oil we are facing an accelerating growth rate.

Let me now discuss briefly the supply side of the picture.

There are three significant aspects to consider in estimating the supply of distillate fuel oil: Refinery production of distillates, imports, and inventories.

The inventory of distillate fuel oil is greater than it was last year at this time, but less than it has been for the average of the last 3 years. With demand increasing one would be certainly more comfortable if inventories were running ahead of the 3-year average instead of behind it. However, in the month of October, and in early November inventories generally are filled to peak capacity; so the distillate storage situation still has some time for improvement.

In order to gain a perspective on the distillate situation, we have to set up a supply-demand ledger or base case. We predicted the increase in demand of 10.4 percent which would occur assuming a normal winter; estimated the production of distillate oil while assuming refineries would run at maximum throughput; allowed distillate inventories to be pulled down to 100 million barrels by the end of the heating season; and filled the remaining supply-demand gap with imports.

The assumed definery capacity utilization for the base case was 91.7 percent, with gasoline demand being met. The imports of distillate fuel oil needed for the base case to balance supply with demand was 650,000 barrels per day. Our previous high rate of imports sustained for any length of time was an average of 530,000 barrels per day for one quarter last winter. We estimate a potential distillate fuel oil import supply from various foreign export centers of 550,000 barrels per day assuming normal weather conditions in Europe. We are not sure that the imports will be able to meet all environmental standards. They probably would have met last year's but some standards have been tightened. Quantities much larger than 550,000 barrels per day can be made available by relaxing standards.

In other words, from our base case, which assumes normal temperatures in the United States, Canada, and Europe; refineries running full; no adverse influences such as the oil exporting countries limiting crude oil production or foreign refining centers limiting exports, and no inhibition toward importing crude oil or products due to phase IV guidelines, et cetera, we predict that we may have a deficit of about 100,000 barrels per day of distillate fuel oil this winter. Several variables may work for or against us. Some of the more significant are:

1. Refinery capacity utilization—we have estimated a utilization of 91.7 percent for crude oil throughout which corresponds to about 98 percent of overall refinery use. If an additional 2 percent could be realized there would be a corresponding reduction in import demand of 200,000 barrels per day. Conversely, a reduction in capacity utilization of 2 percent would result in an increased need of imported petroleum products of 200,000 barrels per day.

2. Average temperature in the United States—a colder than average winter, such as we might experience 1 year in 5 would increase distillate fuel oil demand by 130,0000 barrels per day for traditional fuel oil uses. Moreover, additional demands would be placed on distillate due to curtailments of natural gas. This amount has not been quantified.

3. Average temperature in Europe—if the temperature in Europe were colder than average, the potential quantity of oil available for import into the United States might be reduced by 300,000 to 400,000 barrels per day.

I have discussed at some length the many variables that affect supply and demand for fuels. Often the public is critical of the Government for not knowing the exact number of barrels of supply and the exact demand for oil. The previous discussion should illustrate that such numbers cannot be quantified precisely. Too many variables are involved. Even in winters when there are large inventories and spare refinery capacity, shortages can occur in localized areas due to extreme weather conditions, lost refinery capacity, transportation tie-ups, et cetera.

Our projected balance of the supply/demand situation for distillate fuels can be invalidated by one of many items, such as an embargo on exports of crude oil by an oil-producing nation; or colder than normal weather in Canada, United States, or Europe; or a fire or explosion in a large refinery; or even a labor strike by either refinery workers or dock workers.

Now, Mr. Chairman, if I may, I would like to discuss some of the recent programs that have been proposed.

On August 24, 1973, Gov. John Love, Director of the Energy Policy Office, anounced the publication of proposed rulemaking for the establishment of priorities of use for certain low-sulfur petroleum products. The proposed action, if implemented, would temporarily prohibit utilities, industrial, and commercial firms from: (a) Switching from coal to petroleum products, (b) switching from residual fuels to distillate—home heating oil—fuels, or (c) increasing the quantity of distillates blended into residual fuel oil, except where such actions were absolutely necessary to meet primary, health related, ambient air quality standards. The action is designed to assure sufficient supplies of petroleum products, especially home heating oil, to meet essential needs. This proposed measure would not roll back any gains already made under the Clean Air Act in reducing the sulfur emissions. It does impose a temporary halt to the trend toward lower sulfur content fuel oil wherever progress toward primary standards is not affected.

Public hearings on the proposal were held on September 6 and 7, 1973, and written comments were received through September 14, 1973. The majority of comments favored the proposal, but most comments, whether for or against the proposal recommended some type of modification in the regulation, in particular rephrasing of several sentences and paragraphs. Also there were some criticisms concerning the filing of an environmental impact statement that such an action would have. Incidentally, a draft environmental impact statement on the proposed rulemaking has been released. The comments on the low-sulfur priority use of fuels will be evaluated this week and a decision on whether or not to promulgate the regulation will be made some time thereafter.

On August 31, 1973, a proposed mandatory allocation program for propane was announced by the Director of the Energy Policy Office. Public hearings were held on the proposed regulation on September 7, 1973, and written comments were accepted through September 14, 1973.

The purpose of the propane allocation program would be to assure that available supplies of propane are directed to those customers to

whom propane is essential for their physical well-being or for the production of agricultural commodities. The propane supply situation is our most critical fuel problem and as such, requires special consideration. As you pointed out, Senator Humphrey, there are many problems with regard to propane. There is certainly an issue of timeliness and there cannot be any lapse in time and we realize that.

Propane fills a vital link in our entire energy balance; it provides a clean fuel which can be burned interchangeably with natural gas. As contrasted to uses for natural gas, however, propane is most frequently utilized where the city gas mains leave off or where natural gas is not available—primarily in rural areas. Propane is an essential fuel for home heating in our rural areas and for special agricultural purposes, such as crop drying, as you have mentioned this morning.

In the recent past, when natural gas has been curtailed, propane has been used as a substitute fuel. This increase in demand for propane cannot be afforded. Moreover, at present, 70 percent of our propane supply is recovered in natural gas processing plants; the lack of increase in natural gas production results in a corresponding lack of increase in the supply of propane. I once again point out that natural gas production must be encouraged.

The comments on the proposed propane program are being reviewed at this time and a decision on the final form of the regulation will be forthcoming soon. Incidentally, the comments on the regulation indicate an approval of the intent and objective of the action, but are often conditioned on the basis that the author of the particular comment receive a priority rating, which I am sure you understand, Senator.

Chairman HUMPHREY. I have been hearing those comments frequently.

Mr. LIGON. Yes, sir.

As most of you know, a mandatory allocation program for all petroleum products was published for comment by the Energy Policy Office of the White House on August 9, 1973. The comments on the mandatory allocation program were due by September 10, 1973. The comments are being evaluated at the present time, with the report due to Governor Love on September 21.

With the experience that we have accumulated while administering the voluntary petroleum allocation program, the training and experience which our people have gained, and the comments we are receiving on the proposed mandatory program, we feel that we will be in a good position to implement a revised program, be it mandatory or voluntary in nature, that will be effective. It will be the responsibility of the Office of Oil and Gas to administer the program and we will be in a position to react quickly if the need develops.

I have a few comments, Senator Humphrey, with regard to the voluntary petroleum allocation program.

Chairman HUMPHREY. Yes.

Mr. LIGON. There are presently 4,373 active cases in the operations center for the voluntary petroleum allocation program. To date, approximately 2,322 cases have been resolved. About one-half of the active cases concern gasoline, one-fourth diesel. However, as we move into the heating season, we expect, of course, to see more and more incidences of heating oil shortages to show up.

The States with the most complaints are agricultural regions—the Midwestern States, Kansas, Missouri, Illinois, Iowa, Nebraska, and Texas.

We feel that the voluntary petroleum allocation program has been effective in getting oil supplies to priority users, agriculture needs, food processing, municipal bus systems, et cetera. The program has had only limited success in obtaining petroleum supplies from new suppliers for resellers who were cut off for one reason or another by their former supplier. These are instances where the original suppliers stopped marketing in the area, went out of business, or had limited supplies. There have also been problems with the crude oil part of the allocation program—there has been no question about this—but this was due to pricing problems rather than noncompliance with the program. Quantities of crude oil that would put the supplier of crude oil in compliance with the program were actually offered but at prices equal to imported crude oil. The person seeking the crude oil could not afford to purchase the material because he would not be competitive in that particular area.

In conclusion, Mr. Chairman, I would like to emphasize that we are confronted with the possibility of distillate fuel oil shortages for this winter. The potential deficit is of the order of 100,000 barrels per day as we see it, but the entire supply/demand situation is a function of many variables that cannot be quantified precisely. Programs need to be devised and implemented that encourage the use of coal in lieu of oil and that increase our access to additional quantities of foreign oil, if we are to avoid a severe shortage. Of equal significance would be the utilization of various conservation measures.

A national determination to conserve fuels could quickly eradicate the potential shortfall of fuel. There are various conservation measures that should be conveyed to the general public in every way possible. Some estimations demonstrate the potentials for energy conservation.

If all heating oil customers reduced indoor temperatures only 2° during the heating season, the resultant fuel saving would approximate 210,000 barrels a day. Savings of the same order of magnitude could be achieved if storm windows and doors were added to all heated structures now lacking them. Further savings are possible through improved thermal insulation. Equivalent measures in gas space heating would reduce levels of gas curtailments, thereby reducing the call upon heating oils to replace gas.

A serious fuel conservation effort, enlisting the participation of all citizens, could greatly reduce the threat of fuel shortages, except under extreme conditions, for 1974. Patently, such a volunteer effort cannot be expected to be fully effective, of course, but conservation nonetheless has an obvious and important contribution to make in any national energy program.

Mr. Chairman, that completes my statement.

Chairman HUMPHREY. Thank you very much, Mr. Ligon.

I believe it might be well now if we hear from Mr. Quarles and then, Congressman Carey, we can proceed with some questioning because we have marked up your testimony as we have gone along here, Mr. Ligon, and we will get back to you.

Mr. LIGON. Thank you, sir.

Chairman HUMPHREY. Thank you very much.

Mr. Quarles, your title is Deputy Administrator of the EPA?

Mr. QUARLES. Yes, sir.

Chairman HUMPHREY. We welcome you here in light of the comments that have been made particularly on environmental standards.

Please proceed, Mr. Quarles.

STATEMENT OF HON. JOHN R. QUARLES, JR., DEPUTY ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY

Mr. QUARLES. Thank you, Mr. Chairman. I am very pleased to be with you this morning and I think this opportunity and every opportunity we can get is one we treasure to try to put into a better perspective what the relationship really is between the energy problems we have and the environment.

I am pleased to be with you today to discuss the issues of a fuel supply and clean environment. The committee is to be commended for its public examination of the interrelated problems of fuel supplies, especially the fuel needs during the coming winter months, and our continuing need for a clean and healthy environment.

A great deal has been said in recent days concerning these problems. Unfortunately, some believe that the energy crisis and the need for a clean environment represent an irreconcilable conflict.

Hearings such as this can help to set the facts in the record straight, can give us a proper perspective of the problem, and can identify the public policy which embraces both the immediate solution and the long term solutions to the problem. It is my belief that such solutions are available.

First, I would like to say at the outset that we consider this a problem of enormous consequence. The ability to heat our homes, run our factories, and attend our schools are all at stake. In short, we are concerned here with nothing less than the ability of selected portions of the Nation to conduct the tasks that characterize civilized society. When we talk about the problems, I would like to have a distinction in all our minds. This is between the problem of providing adequate fuel to meet our total fuel needs for the moment, completely ignoring any distinction between high sulfur fuel and low sulfur fuel, or simply the base quantity of fuel that is needed; and from the other side, the issue of environmental problems which relates solely to what fuel is available in particular places to meet the restrictions on the sulfur content of fuel. There really are two problems and they should be kept separate.

The root cause of the problem is the presence of sulfur in our principal fuels, coal and oil. When those fuels are burned, sulfur is transformed into sulfur dioxide, a dangerous and sometimes deadly pollutant in the air. We know that sulfur dioxide causes respiratory disease and it can cause death in those already infirm. It is a pollutant which the law, the Clean Air Act, necessarily subjects to control in the interest of our national health and welfare.

The pattern of regulation provided by the Clean Air Act distinguishes two sets of standards, those necessary to protect the public health which are the so-called primary standards, and those necessary to protect welfare or non-health-related concerns such as crop damage which are the so-called secondary standards. It must also be remem-

bered that the law provides for the achievement of the primary standards by 1975 and achievement of the secondary standards within a reasonable time.

The thrust of the regulations is to control sulfur dioxide-emitting sources to protect against the health consequences of sulfur. As a result, low sulfur fuels such as low sulfur coal, low sulfur oil, and natural gas, are much in demand which has raised the issue of fuel switching to meet the sulfur standards.

The magnitude of the act's requirements can hardly be overemphasized. An entire society, whose affluence has been based on the use of cheap, abundant fossil fuels and also on the utilization of the atmosphere as a dumping ground for the sulfur-based by products of these fuels, is now being asked to change its ways. Legal responsibility for achieving the standards is placed on the States which have devised implementation plans; that is, strategies of regulation to achieve the standards. To date, these plans have evinced two characteristics of extreme importance.

First, many of the implementation plans have chosen 1975 as a reasonable time to meet the more stringent secondary standards in addition to the primary standards. Let me back up and be sure we understand that. In other words, the primary standards identify what is needed to protect human health. In addition to those standards, there are also in some instances more stringent secondary standards that protect against damage to materials and vegetation.

In a number of instances States have imposed regulations to achieve the secondary standards more rapidly than they really have to under the law, and in this sense there is perhaps more control than the law requires, what might simply be described as regulatory overkill.

Second, States have imposed Statewide emission regulations that ignore differences in air quality between regions. Again, this means that scarce low sulfur fuels may be used indiscriminately throughout a State rather than in areas of greatest need. Consequently, the ambitious State implementation of an already far-reaching statute has served to make much of the high sulfur coal and oil unacceptable under existing State regulations. It has further served to place a premium on obtaining clean fuels such as low sulfur coal, low sulfur oil, and natural gas which can meet the standards. In some cases it has led to mixing high sulfur residual oils, used in power plants, and low sulfur distillate oils, used for home heating, in order to create a product for use at power plants meeting State sulfur regulations.

The agonizing truth is that today there simply are not enough clean fuels available to meet the energy needs of the country. Here I should point out that while this statement is accurate it has to be understood in the perspective, first, that we are talking about today rather than in the long run; and second, that when we talk about today, we are talking about today in terms of the existing patterns of distribution and other factors that affect the ability of the society to get enough low sulfur fuel where it is needed particularly in regard to oil. In an absolute sense, it would not be accurate to say that there is not enough low sulfur oil to provide the amounts required by our regulations.

Representative CAREY. Mr. Quarles, may I interject there? I want to put that criticism of the environmental protection plan to rest once and for all. I do not mean to be hypercritical toward the oil refining industry. It can stand its share of criticism.

I hold that history shows if you had not imposed on the States or agencies, such as your own, requirements for low sulfur production to be met, in other words, additional supplies of low sulfur fuel production, there would have been no incentive to create new refining capacity. They would have sat on the present refining capacity and continued to supply higher sulfur content oil in accordance with demands as they saw fit to meet it. Because the old refineries could not produce low sulfur fuel, because they had to find new sources of low sulfur fuel, the industry increased production in a number of areas; for instance, in Puerto Rico and in an activity my own brother is engaged in in the Bahamas. They did it in order to meet the new standards and anticipate the new demands that had to be met.

So without imposition of the new standards we would not have had the additional refining capacity that is helping to meet the crisis right now. Invoking the environmental standards actually caused an increase in production to meet the new standards. If we keep this up we will work our way out by meeting the standards and making them build new refining capacity.

Mr. QUARLES. Congressman, I appreciate those comments and I think it requires a degree of sophistication for people really to understand the real factors in this picture. But in many instances people just on the very superficial analysis are saying that the problem is an environmental problem. It is far from that.

I would go beyond what you said also to look a little into the future and suggest that to the extent that the environmental requirements are perhaps causing the shoe to pinch today even more than it otherwise would, we may well look back on this a few years from now and be grateful for the fact that this has happened. We are looking down the barrel of very severe energy supply problems in the future and anything that helps this country to face up to those problems as quickly as possible and take steps now that can ameliorate the severity of the picture for the long run will prove to be beneficial to the country.

Now, even if we factor in such sulfur-removing processes as desulfurization facilities for oil or stack gas-scrubbing technology for oil and coal, we do not now have enough to meet the immediate energy needs of the country.

Some of the misinformed would lay the blame for this shortage at the door of environmental protection. While the precise part played by environmental regulations is still unclear, it has certainly been exaggerated. Many factors have contributed to the problem. These include:

Lack of refining capacity in this country, especially desulfurization facilities;

Unpredictability of Mid-Eastern sources of low sulfur crude;

A natural gas shortage;

Powerplant and refinery siting opposition; and

The residual effects of the import quota program.

Much could be said about each of these causes. But I would simply say here that the causes are numerous and complex, and that the foremost cause is not the imposition of environmental regulations.

However, while Federal environmental regulations have not been the principal villain in creating the dilemma, the manner of their application is a crucial ingredient in fashioning a solution.

We believe it behooves policymakers at all levels to act with reason and constraint. This is not the time for indiscriminately and inflexibly applying all our present environmental regulations wtihout regard for the larger public interest. Rather, we must focus our efforts on fashioning policies that will serve both the environment and other factors vital to our total society. To put it simply, I would say that while speaking as an environmentalist, I feel that we have not caused this problem. We feel that at the same time we have a responsibility to participate however we can toward finding a solution.

As a part of that policy we must deal with the "clean fuels deficit." This is the gap between the clean fuels needed to achieve State standards and those available which has been branded the "clean fuels deficit." The size of the 1975 deficit is approximately equivalent to 100 million tons of coal, or about one-sixth of the coal currently used.

Our concern over this deficit is that it jeopardizes the achievement of the most important health-based primary standards. Clean fuels that are employed to meet statewide secondary standards might be effectively denied to those areas which may need them to meet the primary standards. Accordingly, high priority areas desperately needing low sulfur fuels to meet primary standards could find themselves unable to procure these clean fuels since they will be siphoned off to meet secondary standards elsewhere. It is just a matter of putting low sulfur fuel where you need it most.

Now, the response of the Environmental Protection Agency has been the initiation last fall—a year ago—of a "clean fuels policy" for coal. Our objective has been to allow for the concentration of clean fuels in areas of highest need by discouraging the use of low sulfur fuels unless such steps are needed to meet primary standards. To carry out this policy we have requested States to: First, focus on achieving the primary standards first and then phase in implementation of the secondary standards, and second, initiate a statewide review of their implementation plans on a region-by-region basis to insure that clean fuels are only required in high priority regions within the State.

Changes in regulations needed to implement this policy are currently under consideration in Ohio, Tennessee, Alabama, Michigan, and Illinois. In order to make these changes which essentially would redress perhaps the overregulation we spoke of earlier, States must go through public hearings and other formal procedures. In these States I have mentioned, the States are well on the road toward completing those procedures and we anticipate that the changes will be made.

The second component of the fuel shortage concerns oil, and more specifically, low sulfur distillate heating oil this winter. Here we are not talking of a projected 1975 deficit from State implementation plans but rather the temporary convergence of a host of factors to create a shortage this winter. Because of the immediacy of the problem and its seasonal confinement to the winter months—we adopted a variance policy for last winter's shortages. This involved an ad hoc procedure under which the Environmental Protection Agency approved State-granted variances to State sulfur regulations of fuel oils in emergency situations. Of the 13 requests we received last year, we approved 6. Although successful, this policy had the drawback that such spur-of-the-moment variances are effective only when we are

talking of small isolated shortages. It can be too little too late if you had a really serious problem.

In contrast, this year we have some advanced warning of an impending shortage that may well be greater than last year's. Furthermore, we will be relying to a greater extent on high sulfur foreign imports. Given the increased magnitude of the problem, we have undertaken to fashion a more systematic variance policy that will allow us, as in the case for coal, to have low-sulfur oils for those areas of greatest need; that is, for home heating and where the primary health standards are involved. It is this more comprehensive and orderly approach which was the subject of the President's September 8 statement and Mr. Train's press conference on September 13.

Although this expanded variance policy has many of the same objectives as our clean fuels policy for coal policy, such as directing clean fuels to points of greatest need, there are some distinct differences worth noting. The first is timing. We expect the coal problem to come to a head in 1975 when many of the State coal regulations come into effect. In contrast, the oil problem is already on us. Sulfur regulations for oil are already in effect in many States. In the case of coal, we need a delay in implementing the secondary standards, while for oil we need variances to existing State sulfur regulations. The second major point is duration. Our coal policy represents a longer term effort to shift clean fuels to priority areas, while our oil variances are a temporary seasonal effort to account for fluctuations in the availability of low-sulfur fuels during the heating season.

An important aspect of our variance policy that must be woven into any policy dealing with energy is conservation. Although sulfur removal technologies and emerging energy sources such as atomic energy offer long-term solutions, their potential contributions are being offset by our seemingly insatiable appetite for energy. We must begin now to adopt vigorous conservation measures in order to bring our energy demands in line with supply.

As a step toward establishing these needed conservation measures, a consideration in granting variances this year will be the adoption of conservation measures by the Governors. As with any crisis, certain hopeful possibilities are emerging from this winter's shortage. Americans may be shocked into the realization that their continued affluence demands the adoption of an ethnic of prudence not only in the use of energy, but ultimately in the use of all the earth's resources.

I believe it is absolutely essential that we view our current problem fom a long-term perspective. As we see it, the fuels shortage is an immediate and serious problem but not inherently a long-term problem. Again, here particularly I am focusing on this from the environmental viewpoint of the sulfur regulations. It may be inherently a long-term problem in the sense of having enough fuel but it is not a long-term problem in the sense of achieving the goal that whatever fuel is available meets the environmental requirements.

Because fuel desulfurization equipment is not as available as is needed, we are obliged to seek some delay and to grant some temporary variances. We intend to do this this carefully and prudently and only to the extent we are convinced it is required by broad public policy.

Most important, however, is the fact that we can have the technology we need to remove sulfur from fuel.

For oil, such technology already exists in the form of desulfurization facilities. Nobody questions that those are commercially available and in widespread use now. Yet, the quantity may be inadequate. It is simply a matter of capacity, a matter which private industry is capable of solving. For coal, the immediate hope is in stack gas scrubbers. Further down the road for coal are two technologies which appear to offer even more promise. The first is the conversion of coal to clean liquid or gaseous fuels prior to combustion, leaving sulfur constituents in the residues. Included here are mechanical cleaning, solvent refining, low Btu gasification and liquefaction. The second process involves redesign of the combustion process such as the use of fluidized beds or molten iron baths that remove the sulfur.

I am optimistic that we may enjoy both an adequate fuel supply and a clean environment. We are not confronted with an irreconcilable conflict. Rather, we are faced with a challenge to adapt and apply American ingenuity and technology to the problem while we hold fast to the ideal of a clean and healthy environment. We must meet with some flexibility the immediate problems which arise from the fact that we have not yet applied technology on a broad scale to control sulfur oxides pollution. Simultaneously, we must push ahead agressively to install the needed equipment so that we will not be forced in the future to modify our enforcement of requirements established to protect the public health.

Mr. Chairman, this concludes my statement. I will now be pleased to answer any questions.

Chairman HUMPHREY. Gentlemen, we thank you. I thought that the witnesses as well as the general public might be interested in an extraordinary well-documented staff study that was prepared by the Joint Committee on Atomic Energy entitled "Understanding the 'National Energy Dilemma.'"

Last evening I was privileged to attend a meeting of the Georgetown Center for International Studies at which Mr. Jack Bridges, among others—Mr. Bridges was the technical director for the Joint Committee on Atomic Energy—made a presentation relating to the energy problem. In this connection, I was interested, Mr. Quarles, when you said that the problem of energy was not really a long-term problem; then you clarified that you were referring to the problem of the impact of energy consumption on the environment. Mr. Bridges indicated that the problem of matching energy supply to our soaring demand is a very difficult long-range problem. If the American public and the leaders of Government and industry will study this report, they will get a shock the likes of which no human being has ever experienced about the future of mankind because it is a staggering, startling, agonizing report.

To give you an example of what is happening to us. I will just read a paragraph here:

Trends indicate that from the year 1970 through 1982, the United States will use as much oil and gas as it has used from the beginning of its history until the year 1970. To compound the problem, much of the rest of the world itself now has an energy consumption pattern that is growing at a faster rate than our own. It now appears that the world as a whole will use as much energy from all forms between the period 1970 until the year 2000 as it did from the start of

mankind until 1970. It is this massive growth in the use of fossil energy that has mainly created the energy dilemma that exists in the United States and throughout the world.

The rate of demand as projected, even taking it and cutting it by 25 percent, and assuming tremendous price increases and all that you can think of, would put the demand about three to four times as much as we presently use. We have heard a great deal of talk about oil shale. In order to produce 3 million barrels a day of oil shale you would have to dig into the Rocky Mountains areas as big as the Panama Canal every day and you would have to use the combined flow of water of the Colorado River and I believe the Missouri River in order to be able to take care of it. At least two of them, the Colorado River and one other major river.

The problems are staggering. When you look at the Alaska Slope, and we, of course, are very interested in it, what it can mean, it is a drop in the proverbial world bucket as to what is needed. You look at geothermal energy and it hardly even makes a reverberation on the chart.

The possibilities are, of course, in oil imports, the possibilities are in nuclear processes such as fusion, but no one feels that fusion will be a reality until about the year 1990.

What I am trying to say is that I have been through these exercises up and down and, if we continue to use energy at the rate that we are, the prospects for the future are unbelievably frightening because there just is not the fuel supply available under present technology to take care of the expanding needs.

The takeoff point in America was at about 1950, and since 1950 we have been doubling the use of energy about every decade. When we look at the problems, for example, we also have to talk about tankers. We have to talk about ports. We have to talk about refineries. We have to talk about pipelines. We have to talk about a distribution system. We are talking about being able to do in 10 years, or indeed in 5 years, what we did in the last 100 years. In fact, the year 1975 poses some problems that are almost beyond our comprehension.

Now, the problem is that in our Government there is no center of responsibility. The executive branch has now placed the responsibility in Governor Love. But where do you go in the Congress? We are all over the lot. We have got the Joint Committee on Atomic Energy, the Joint Economic Committee, the Public Works Committee, the Interior Committee. We have a dozen subcommittees looking into this but we have not yet arrived at an energy policy. We come up with all kinds of hurried formulae. For example, I happen to believe we ought to do everything we can in terms of our coal resources, but we would be deluding ourselves if we believed that we can manage the fuel program by just looking at our unlimited coal resources. And surely, we have been literally intellectually intoxicated by the possibilities of oil shale.

I only want to say that that is still a feasible project but when you get to the amounts, again it is staggering.

If you were to increase our hydroelectric power where it would have any amount of effect upon the energy, would you have to dam up the Grand Canyon and every available site in the country and take over every wilderness area? This is a problem that is just almost out of proportion.

We imported $7½ billion worth of oil, I believe, in about the last year. The dividends from multinational corporations in oil taxes are about $3½ billion. It left us with a $4 billion deficit. In 1975 it is an estimated $15 billion. One of the large financial concerns in New York commented that, when we get to the point of a $20 to $30 billion per year outflow, we would be bankrupt. An outflow of this magnitude for energy is inconceivable.

We have no assurance even of the oil supply from the Middle Eastern countries, even though I think this may be somewhat overplayed in present current events or present news items; namely, that there will be a slow-down. I think we have to look forward to what is going to happen, though, the price increase. The producing companies are going to have another meeting. It is a sellers market and they are obviously going to increase the price. There is no doubt about it.

I could go through this extensive documentation but, I am not going to. I want to say that on three occasions now I have gone through these intense, in-depth briefings on the energy crisis, and what I read and what I hear is so juvenile, so infantile, that it insults the intelligence of the American people until you get down to read what the real facts are. I think that what we are talking about here is what we are going to do between now and next April. But what are we going to do between now and April 1980? What are we going to do between now and April 1976, our 200th anniversary of this Republic? And I do not think anybody is really leveling with us on this except sporadically, hit and miss.

By the way, there is no study that shows there is any way out. I think that is a fact. There are these studies that indicate the problem is almost beyond our comprehension. But no one has come up yet with a program that says you can really manage it unless you change the whole lifestyle of the world, not just the United States, and we are a very parochial people. We talk about oil as if somehow or another we are the only ones that are using it, when in fact the Japanese, the Western Europeans, the Eastern Europeans and others are using it. And, we are giving no consideration to the developing countries at all, as if somehow Africa and Asia are just going to stay like they are, that there is nobody going to high technology, to industrial growth or expansion. I really believe there is no problem that confronts this Government today that is more important, more serious, for the long time welfare and well-being of this Republic, than the availability and processing of and the distribution of what we call fuels or energy. And, I submit right now that there is no one on the face of the earth that has an answer to the projections that are being made as to the use of energy.

This Nation, highly industrialized, believing in comfort, is a prime target for disaster because what we call inconvenience is a hardship in Europe, and it is really almost a matter of survival in other parts of the world.

So we are talking a little bit about whether we are going to be a little colder this winter, and no one has really projected what would happen in an international struggle for the limited resources we have. We look to countries like Iran and Saudi Arabia and say, well, there are unlimited supplies. The fact of the matter is that while those supplies are great, they are not unlimited in terms of projections if you are willing to look ahead 10 years. But the trouble in this country is nobody wants to look ahead 10 months.

I am asking you to look ahead just through the winter. Can we get by this year? There is no one that can produce a refinery in 6 months, and you cannot build a pipeline in a year, and you cannot even expand your port facilities for the superports that you need in a year.

So we are talking about an immediate problem to get by, buy time. What we are talking about is buying time with hopefully some form of allocations, whether they are voluntary or mandatory, and then buying time through conservation, buying time for more refining capacity, but ignoring the fact that everybody else in the world is doing exactly the same thing and some of them feel it more seriously than we do.

The Japanese, for example, are not only buying time, they are buying resources. This is one of the great problems today in the world, that currency has lost its value and commodities have become the new currencies. That is why there is a commodity speculation the likes of which the world has never known.

This is my little sermon for today, but I think the time is at hand to tell the American people the ugly, naked, sordid truth, that unless somebody comes up with some ideas around here and starts to plan to conserve and to expand our facilities, to increase our research in a massive way on both solar energy and nuclear energy as well as the research on coal—and I mean putting billions of dollars into this research—this country could come to a grinding halt; not only this country but other parts of the world.

Now, that sounds like an extravagant statement but every bit of documentation that is available in the hands of the officials of this Government, and of the oil industries, document that what I have said is a modest, subdued statement of the long-term possibilities or realities.

That is why I thought that for the year looking ahead we had to take a look at the possibilities of a cold winter and we do have to take a look at those possibilities.

I have lived my life in the upper Midwest. Nobody can tell me that it is going to be warm, because that does not happen very often and, if it does, it generally projects something for the future. The last time that we had warm winters over a period of years, we had bad crops. It got too dry and we had bad crops. We had some indications of that this year with both the flood in one area and drought in others.

Now, Mr. Ligon, you said at the end of your statement something to the effect that a national determination to conserve fuels could quickly eradicate a potential shortfall. I know you are speaking of the immediate shortfall.

Mr. LIGON. Yes, sir; that is correct.

Chairman HUMPHREY. I wonder if you might be able to comment a little more fully on the plans for such conservation. For example, how successful has the voluntary conservation program the President announced on June 29 been and what specific conservation measures besides heat conservation such as you indicated, turning down the thermostat a couple of points, are being considered both for this winter and the longer term, and what incentives will be initiated to get a massive conservation effort underway?

Mr. LIGON. Senator Humphrey, I think, as you point out, that any voluntary type of program is limited as far as its effectiveness is concerned, but I think that any voluntary program that is introduced is expected to encompass conservation. I think the American people

have got to have this and the severity of the total problem brought to their attention constantly and I think it must be done by the very senior leaders in our Government all over the country.

Now, there has been the establishment of an Office of Energy Conservation in the Department of the Interior that will devote its efforts to that type of endeavor 100 percent of the time. Secretary Morton is currently working with Governor Love on plans for a conservation program that will be announced for the winter and it will have as its emphasis just the things that we have been talking about, the severity of the problems that we face and how much difference just a little bit of effort by our public could make, and it is on that type of thing, I think, that the public must be quickly educated and they must be aware that the senior officials in our Government are also aware.

Chairman HUMPHREY. Are you planning to call in the civil defense directors, the Governors, to launch programs at the local level and with proper organization?

Mr. LIGON. Yes, sir, that is correct, and in certain States we have, as you know, worked with State-level energy organizations with regard to allocations and supplies within that particular State. Generally it is part of the Governor's office and his efforts and we have felt that that might be a suitable vehicle to also work with on the State level as well as the local level. We are working in our regional offices as well as through the Department of Agriculture's branch offices all over the country to also stress this point.

Chairman HUMPHREY. One of the points that you have emphasized here is this business of getting low sulfur fuels to the places that need them.

Mr. LIGON. Yes, sir.

Chairman HUMPHREY. Is the voluntary allocation program attempting to do this, and not only attempting but is it having any success in doing that?

Mr. LIGON. I think there are two parts to any type of consideration of that issue, Senator Humphrey. The first, of course, has to do with the crude oil. Crude oil is very important for the refineries and certainly important for the refineries in the Midwest which supply a portion of our country that has run short on product.

We felt that the voluntary allocation program has not done the job that it should have done with regard to getting the low sulfur crude oil to those refineries that needed them and as a result, we have suggested and advised modifications that hopefully would help alleviate that problem.

The second part of the issue, of course, has to do with the products and the emphasis on the product part has to do with increased imports and the availability of high sulfur imports from European refineries as well as Caribbean refineries as far as imports are concerned generally.

Now, the European refineries, as you know, are distillate production-oriented, versus our gasoline production-oriented domestic refineries and this is a place, of course, that we can turn to for some help in this short-term period we are talking about; but we have got problems with regard to that because many of the product specifications in gasoline and distillate are not able to meet the standards that we have here in the United States. For instance, there are standards for lead, octane ratings in gasoline, and sulfur, of course.

Chairman HUMPHREY. Has there been any indication that there would be a greater flow of exports from European sources to the United States in light of what appears to be a growing international tight supply on all forms of petroleum products?

Mr. LIGON. Europeans, of course, are established much the same way as we are and I think we are fooling ourselves if we think Europe is going to bail us out and that European refineries will provide the answer. That is not right beyond the wildest stretch of the imagination. But they have indicated they will continue to import what we would like to have as long as they are able to do that with regard to their demands, which by the way, are soaring, just like our demand is, and with regard to the severity of the winter that they will experience. So that is no answer. You are right.

Chairman HUMPHREY. The voluntary petroleum allocation program as it was originally announced, listed certain priority users that included all the major users of fuel oil except industrial and commercial users and construction. It assigned priority to home heating and transportation, which used the bulk of the fuel oil in the winter. For a relatively small shortage, therefore, the program would seriously cripple industry.

Now, the administration has indicated it is also considering rationing home heating oil. Are the priorities that your voluntary program operates under still those announced back in May or have they in fact been changed?

Mr. LIGON. No, sir; the priorities are the same. Now, you are familiar, Senator Humphrey, with the mandatory draft allocation program that was placed in the Federal Register. There is a different twist with regard to treatment of priorities in that plan and, of course, that allows the States to set the priorities on a State level based on the way they see the most important categories. We have suggested that the priorities that we set in May are suitable ones to be followed by the States if they feel that that is appropriate in their particular case but they are not tied in any way to that list.

Chairman HUMPHREY. Here is a problem that comes up because what you have told us today, I think, is fairly well understood in the trade as they say, and amongst the users. If we have fuel oil stocks that are relatively close to normal, and I believe that is about what you are indicating in your testimony——

Mr. LIGON. My testimony indicated, Senator Humphrey, that they are about a 3-year average but let me be very specific about that because they are behind last year.

Chairman HUMPHREY. Yes.

Mr. LIGON. But they are a bit ahead of 2 years ago but that is deceptive somewhat because 2 years ago we had very mild winters and that is not a fair barometer.

Chairman HUMPHREY. That is correct. And also there has been a great shift from coal——

Mr. LIGON. Yes, sir; that is correct.

Chairman HUMPHREY [continuing]. To gas and fuel oil. But if we have fuel oil stocks let us say that they are at about that 3-year average that you had, and you say they are higher than last year, is that right?

Mr. LIGON. Yes, sir; that is right.

Chairman HUMPHREY. Then, why are so many long-time established customers like school boards, trucking companies, airports, farm cooperatives, unable to get firm commitments from suppliers on at least the amounts that they used last year?

Mr. LIGON. Two are problems there, Senator Humphrey, that at least come to our attention in trying to help the people who use the supplies to get their adequate share.

First of all, of course, is the absolute issue of supply itself. That is what you are talking about. Many times we go into the particular areas that you have spoken of and we find that it is a problem of price as well. For years and years a particular supplier has been the only one to bid in that particular area with a school board or something.

We find that they as a result of using large quantities to this particular customer, in this instance a school in our hypothetical, they have given it to them—give the product to the school for a few pennies less than they were able to sell it in the market or the open marketplace.

Obviously, there is a changed set of circumstances today. They do not have to sell it for a few pennies less or anything else and we find ourselves involved in a situation where there is no wholesale market and that is the market, of course, that has supplied the type of customers that you are taking about for years. It is an entirely different situation now and many times the suppliers are not willing, therefore, to come forth with the particular supplies at a particular price that they have always supplied at before. And in that case we go to the suppliers and explain the situation, explain how very important it is that they do get the adequate supplies for that particular school or metropolitan authority or sewer authority, as in Minneapolis, and so forth, and that is about the extent of our persuasive ability; but that is the reason as we see it, Senator Humphrey, for the change in the circumstances with regard to this. There is difficulty and the suppliers are not coming forth many times voluntarily.

Chairman HUMPHREY. I want to say in the instance that we brought to your personal attention you have been very helpful and I have said so publicly and privately.

Mr. LIGON. Yes, sir. We appreciate that.

Chairman HUMPHREY. But the problem is that there are just too many bases to cover.

Mr. LIGON. That is right; yes, sir.

Chairman HUMPHREY. And wherever we go we find that these traditional customers are having difficulty getting any kind of firm contract.

Mr. LIGON. That is right.

Chairman HUMPHREY. Unless they are willing to go black market.

Mr. LIGON. That is right.

Chairman HUMPHREY. That brings up the question of the Cost of Living Council. Is there coordination between your office and Mr. Simon's office over in Treasury and the Cost of Living Council to see whether or not pricing is causing interruption of supply or price controls are funneling off a certain amount of supply into a form of black market?

Mr. LIGON. Yes, sir. There is very close cooperation with regard to Secretary Simon's office as well as the Cost of Living Council. You

might be interested in the everyday working with these cases. We find many instances of black market activities. When we find these we report them immediately to the Cost of Living Council and with the help of the Treasury Department they are investigated in the field by the Internal Revenue Service.

Chairman HUMPHREY. What is the penalty?

Mr. LIGON. The penalties—there are fines, I know, Senator Humphrey, but I do not know what further than that.

Chairman HUMPHREY. Something we maybe ought to look into.

Mr. LIGON. Yes, sir.

[The following information was subsequently supplied for the record:]

PENALTY FOR BLACK MARKET OPERATIONS

S208 of the Economic Stabilization Act of 1970, as amended (12 U.S.C. 1904) [note] provides that:

"(a) Whoever willfully violates any order or regulation under this title shall be fined not more than $5,000 for each violation.

(b) Whoever violates any order or regulation under this title shall be subject to a civil penalty of not more than $2,500 for each violation."

Mr. LIGON. One other thing of interest to you with regard to this black market activity that you brought up, we found that this happens extensively with regard to propane. Because of the price—in fact, I know you are aware of this—many brokers who had not even been in the business before were coming into the market buying up from big suppliers at high prices, buying up, hoarding, saving until the real crunch comes and they are hoping to make a killing of course.

Chairman HUMPHREY. I want to yield to Congressman Carey now. I have some more questions for both of you.

Representative CAREY. Thank you, Mr. Chairman.

At this precise point I want to interrogate you on this operation of trying to maintain some kind of a price structure in which you try to find supplies for needy users.

In your task force you had inquiry last week from the largest utility in the Nation, Consolidated Edison.

Mr. LIGON. Yes, sir.

Representative CAREY. Looking for supplies to meet their distillate shortage. They had been previously furnished by Cities Service who said they could not meet their requirements this year for a variety of reasons. They went in person to your office and one of your people asked what their requirements were and said they would make an attempt to find them in the market from one of these suppliers you are talking about. They identified a supplier by the name of PBM marketing in the New York area. The utility, pursuant to your advice, went to this marketer and was offered oil at 31 cents a gallon. That is 100 percent over the current domestic market in New York City, one-third higher than the going price for imported petroleum.

Now, if you say you are cooperating with the Cost of Living Council, how do you feel you are helping the shortage in New York City and the coverage of utilities' requirements when you direct buyers to these people? These are not black market operators. These are brokers, opportunists trying to get the most they can for the product, actually sequestering product to meet those large demands and anticipating that you are going to help them get in touch with buyers. How does that help the needy company?

Mr. LIGON. Let me be clear about our authority. Our authority has to do with supplies, not prices. In that particular case with Con Ed, I recall it and we have been working with them quite a long time on this and we have worked with their suppliers in trying to find adequate supplies for them.

I think probably the price problems which we have no control over whatsoever with the exception of being able to make it clear in specific cases to the Cost of Living Council—I was just trying to distinguish for you the two problems and many times we find that we can get supplies for people but they are unable to pay for competitive reasons, good legitimate reasons or for another reason, they are unable to get that.

Representative CAREY. Get it for a dollar a gallon if I want to burst the market. How are you helping the major distillate users in the utility field by directing that user to a broker who sells it at an all-time high level?

Mr. LIGON. The only thing we are able to do——

Representative CAREY. How did the Federal Government get into the business of referring people in——

Mr. LIGON. It happens that the private enterprise market, I guess, could not take care of the situation when left alone because we saw gasoline shortages developing this spring and there was some reason to believe perhaps the Federal Government could be of help when the private parties in the marketplace could not find a buyer and seller.

Representative CAREY. I do not want to be critical of you or anybody in your organization but let me explain to you how you are contributing to giving a blessing to a consumer price increase of astounding proportions in New York. With the color of your recommendation Con Ed suppliers could easily have concluded a contract with this PBM organization at the 31-cent level. Because of the Public Service Commission tariff arrangement in New York State there would have been a pass-through to hand that increased cost of fuel on to the consumer on his utility bill and there would have been no recourse available at all. So one individual would have made a killing. The shortage would have been temporarily abated and the consumer would have paid through the nose.

Now, how is that helping the situation?

Mr. LIGON. That does not. Every——

Representative CAREY. But it is happening.

Mr. LIGON. That is correct, and it certainly would happen in any situation where there is a shortage in the market. The only thing we are trying to do is help suppliers get together with people who are prospective suppliers.

Representative CAREY. You are aware the broker has no storage, no supply, no history, no tradition.

Mr. LIGON. Right.

Representative CAREY. He simply has his hands on a contract, in other words, buying royal futures and can deliver at this price.

Mr. LIGON. In this particular case I would like to——

Representative CAREY. How does that help?

Mr. LIGON. I will be glad to insert that in the record when I get the specifics.

[The following information was subsequently supplied for the record:]

CURRENT STATUS OF CONSOLIDATED EDISON'S FUEL SHORTAGE CASE

On August 24, 1973, Charles F. Luce, Chairman of the Board of Consolidated Edison, wrote to Governor Love stating his company's serious shortage of kerosene and No. 2 oil, ". . . despite repeated contact with all of (their) past suppliers and other industry sources." The serious nature of the problem was emphasized subsequently by calls made to me from Joseph Swidler, Chairman of the New York Public Service Commission; Mr. Lampsey, President of Consolidated Edison; and Mr. Rhodus, Vice President of Consolidated Edison.

The shortage was precipitated by expiration, on June 30, 1973, of a contract with Citgo. Citgo had furnished 3,385,000 barrels of turbine fuel by large lot in addition to 180,000 barrels furnished via truck. Citgo officials maintain that contractual obligations predating and postdating the one year Con Ed contract with airlines preempt them from furnishing Con Ed. Citgo is presently allocating No. 2 fuel oil at 80% to *contract* customers (non-contract customers are served on a basis of proven priority). Jet fuel is allocated at 70%. Citgo could conceivably divert jet fuel from the airlines to furnish kerosene to Con Ed if mandated by OOG. Otherwise, they do not have sufficient product. Last year, Citgo was a net purchaser of 3 million barrels per year of distillate.

Con Ed has present storage capability of 200,000 barrels. They claim to have searched worldwide for product, recently paying almost double the usual price for product. Conservation programs of 5% voltage reduction, advertising conservation by the Mayer, etc., have been in effect. Forty percent of Con Ed's capacity uses kerosene or No. 2 oil

Officials of Con Ed believe a mandatory allocation should be enacted. An alternative for obtaining the product is to use bonded fuel ordinarily used for international jet flights. Mr. Schrock of Air Transport Association does not believe this is feasible. It seems likely that Hess will provide some product.

Mr. LIGON. We have hundreds of cases like this.

Representative CAREY. I hoped you would not have hundreds of cases.

Mr. LIGON. We have many, many cases where people have had real problems with regard to supply, and so forth, and I have pointed out with regard to propane as well as distillates and certainly in the Northeast where the supply is very tight and the consumption is very high, we have some price problems and we have brought it to the attention of the Cost of Living Council.

Representative CAREY. Isn't the truth that mandatory allocations smoke out these fly-by-nights? I am not saying that the offerer in this case is a fly-by-night, but it will smoke out the fly-by-nights, will smoke out the hoarders, will smoke out those that are holding supplies off the market to get a higher price because in the mandatory allocation you either direct it to the mandated user or you eat it? You cannot hold it, sell it otherwise. It is mandatorily directed to the supply needs and it gets rid of most of the black market operations.

Mr. LIGON. I do not think you are going to get rid of black market operations by mandatory allocation systems. There are, of course, many features of the mandatory allocation system that would be very helpful, no question about that, but I do not accept the idea that because we have a mandatory allocation system in one form or another that that will totally prevent any black market activity from occurring.

Representative CAREY. There are no secrets in the petroleum industry. If someone is holding it back for a higher price he should be under a mandate to supply our needs. He has got to sell at today's price. He cannot sell it at some price in the future and then come under the direct surveillance of the Cost of Living Council based on what he sold that product for the last time.

Mr. LIGON. That depends on where the product comes from and there is some question as to whether domestic products which, of course, is much cheaper than foreign products, might be used in any type of transaction like that.

For instance, in the northwest, many of the independent terminal operators which, of course, are very important in the distribution chain——

Representative CAREY. Essential.

Mr. LIGON. No question about that. They feel that they cannot compete with regard to imported foreign oil for their needs with their competitors and that certainly may be true.

Representative CAREY. They can certainly not compete with the foreign supplier if they bid it up to 31 cents a gallon.

Mr. LIGON. True.

Representative CAREY. It really puts him out of business. That is why we ought to stop this kind of thing.

Mr. LIGON. I agree.

Representative CAREY. My notion of the situation like this, and by the way, I spent 15 years in the industry and it is very intricate, when you start tinkering with it you can bring about all sorts of results unless you are very careful, but I look at your high side or the most optimistic side. You predict 100,000 barrels a day shortage.

Mr. LIGON. Yes, sir.

Representative CAREY. I take your figures then on refinery runs, excess use in Europe, climatic change impact, et cetera. It runs up to 830,000 barrels a day of possible shortage taking your figures. Now, the average homeowner has about a 4- or 5-barrel supply in his basement, 275-gallon tank. If I take your figures it is entirely possible on the basis of 4 or 5 barrels per home that we could have 200,000 homes per day without fuel for extended periods this winter.

Now, that is a pretty good extrapolation because that is exactly the size of the number of homes using heating oil in New York City. In other words, on your own figures New York City could be without fuel for a number of days for given periods this winter.

Mr. LIGON. No, sir; that is not correct because in any type of allocation system which you pointed out is certainly needed in a situation of shortfall, I think that obviously homeowners would have a very top priority situation and we would see to it that they received the necessary supplies. That is not acceptable that homes would be cold or anything else.

Representative CAREY. Unless you move swiftly let me point out how the poor are going to get it in the neck. The fellow who has only a 275-gallon tank and buys COD, has no credit, has to buy oil to meet his needs, sometimes buys as little as 100 gallons. He is going to be the first to suffer, the one with low cost home, home probably not insulated, cannot afford a storm door. In fact, you are going to create the greatest shortage of storm doors, the greatest need for insulation and "long Johns" that we have in history. Plenty of aluminum, plenty of insulation, but I want to warn you we have a "long John" shortage coming up. We have got a tremendous woolen shortage impending. We are not going to be able to get wool this winter. Maybe we can get some of that thermal underwear out of the duck hunters in Minnesota.

Chairman HUMPHREY. We have a lot of it up there.

Representative CAREY. It is not going to settle the problem in New York City. You cannot ride in the subways with thermal underwear on, you will die.

This is a real problem. I do not want to be facetious. With many homes per day, among the poor people without fuel, they sleep in the armories, leave their homes. Their pipes freeze. We have got a calamity. I am trying to avert it. We have not had this kind of situation before in the major cities. We cannot switch to coal. You cannot turn a gun-type oil burner over to coal. Maybe a year from now you can do it.

Mr. LIGON. That is correct.

Representative CAREY. You cannot insulate that fast, cannot get home mechanics to insulate that fast. All your good advice, your pressures, cannot be adopted by the average home with a 275-gallon tank. Only one thing is going to help him, and that is that his traditional fuel supplier has enough fuel to give him his 2,000 or 3,000 gallons this winter, give or take 400 or 500 gallons, given most of these supplies. I must warn you on the basis of industry spokesmen—retailers, independent operators—we have had before Congress the past week, they say they cannot meet the demand this winter and every day is becoming a day too late. So I say that I hope your voluntary allocation program is swiftly convertible to a mandatory allocation program. I am not convinced it is, because in a mandatory allocation program you need tickets.

Mr. LIGON. That is right.

Representative CAREY. You have got to have tickets. Have you got those tickets ready?

Mr. LIGON. No, we do not, and let me explain to you the difference. I believe, sir, that you were talking about several things at one time and if I might point out or at least comment on each one of them.

I think in any type of mandatory allocation system we are talking about allocation or distribution on a wholesale level. You are talking about a ticket system. You are talking about rationing, some form of rationing. Of course, that is at the ultimate consumer level. Certainly, the ultimate consumer would receive gasoline or fuel oil or whatever he wanted for those particular tickets.

Now, you made a comment with regard to whether or not the voluntary program could swiftly be converted into a mandatory program. Certainly that is the reason that we put a draft mandatory program out for comment—that is, to evaluate the comments that we might have afer looking at certain weaknesses that we were aware of in the voluntary program which you and Senator Humphrey have pointed out here today. There is no question about that. We are not going into it with our eyes closed.

Representative CAREY. I will tell you why Congress is a little bit confused, more confused than ordinarily. Secretary Morton said he thought this was something good that Congress could grapple with, a good thing for Congress to occupy itself with right now. I respect Secretary Morton, served with him; he is a fine man. I normally look to the leadership in a case like this. I think we need to know from downtown, do you now believe the time has come to implement a mandatory oil allocation program? That is the big question. You have to

make that judgment. We are prepared to give you that authority, we have not held the judgment. Mr. Train says we cannot move forward with the variable program on standards until we get mandatory allocation. As the chairman has said, we need some heads to get together down there—Governor Love, Secretary Morton, Mr. DiBona in the White House, Mr. Train—to say we are now prepared to authorize a mandatory allocation program. Why can we not get that advice?

Mr. LIGON. Those heads have been together and they have talked about that issue based on many of staff recommendations that the Office of Oil and Gas and others—EPA certainly—have made. The decision, I understand, is being taken to the President at the present time and he will be the ultimate judge in this particular case.

Representative CAREY. Well, let me warn again, my time caveat, if you will, every day you wait you are contributing to escalation in prices because oil is being bought up and held by speculators. Commitments are being made at higher levels than they need be under the mandatory program. Refinery runs will not be scheduled unless they are mandated to schedule those runs. Unless we act now, every day we lose is going to contribute to the severity of the shortage. Mr. Macdonald's Committee on the House is moving on this. We would like assurance that whatever we do will be met with cooperative and very positive preparations in your office. I know they will be.

Mr. LIGON. I can give you that assurance, sir, most assuredly.

Representative CAREY. I just want to say the conservation ideas are laudable. We hope to adopt them. I hope the Governors will be getting on television telling the people what to do. But, there is no substitute for a gallon of oil when the burner runs dry.

Mr. LIGON. I agree.

Representative CAREY. It is going to happen unless you act fast.

Thank you.

Chairman HUMPHREY. I want to thank my colleague for his very effective cross examination and for his comments. I not only concur, but it is what I have been shouting about for several months. The delay is going to be everything Congressman Carey has said and more.

The speculation today is not in the dollar. It is in commodities. And I am convinced that there is a lot of panic buying, and a lot of that is contributing, even accelerating, the shortages that are evident now and more of them that will be forthcoming.

We have to have some action, Mr. Ligon, to assure reasonable supplies for our school districts, our hospitals, our public facilities, and for that homeowner that has that 250 to 300 gallon tank. Even allocations at a wholesale level do not really always guarantee that individual homeowner because, again, it might very well be that the wholesaler would prefer to deal with somebody else.

Mr. LIGON. That is right.

Chairman HUMPHREY. But the longer we delay, the more difficult the assignment will be.

Now, the voluntary program does not meet our needs. I know you have done well under it within the limits of a voluntary program. Frankly, the oil companies have to be very careful under the voluntary program that they are not guilty of collusion under the antitrust laws.

Mr. LIGON. That is right.

Chairman HUMPHREY. And the Government has to take the stand.

Now, these heads have been getting together until they must have knobs on them by now. You know, we have been bumping heads around here for months and there is no doubt that every committee of the Congress that has looked into this situation has come out four-square for a system of mandatory allocations. Once having said that, then the machinery to conduct it is very intricate and that is the reason we are concerned here, because, listen, it is cold at home right now. Did you see the football game last night at Milwaukee Stadium? That was not smoke the boys were blowing out. That was cold.

Representative CAREY. Mr. Chairman, I wish I had not. [Laughter.]

Chairman HUMPHREY. I know. It will not make any difference. The Vikings will take them both. [Laughter.]

But the point is that it gets cold out there; we even had frost last night. Once you start getting that, it causes some problems with our crops again.

I want to come back to another matter very quickly and then I am going to go to Mr. Quarles for a moment.

Propane!

Mr. LIGON. Yes, sir.

Chairman HUMPHREY. Why black marketing in propane? All kinds are going on right now. That is known by everybody. We increased the production of agriculture in the United States last year by 42 million acres. A large share of that went into feed grains and approximately an increase in acreage in corn of about 18 percent.

Now, that corn crop is vital to the entire price structure of food. The interrelationships here are so intimate that we just have to understand them. If we do not get propane in the corn belt, particularly in the northern segments of the corn belt, where we are apt to get a damp fall with a quick freeze, then we may lose much of the corn. This means that you have got to have the propane to dry the corn—we dry 80 to 85 percent of all the corn produced in the State of Minnesota. We are a very large producer. We also occasionally have to dry soybeans as we did last year. We did not get the soybean crop out of some fields until December, January, and February, because we got heavy snow early, and then it became warm, and then there was another freeze. It was almost impossible to get the crop out. This meant, of course, it had to be dried if it was going to be usable.

The drying process, Mr. Ligon, must not be interrupted. If the drying process is interrupted it is like a man that has a heart attack and his heart stops beating over 5 to 6 minutes. From there on out the chances of his recovery are practically hopeless.

If we interrupt the drying process by 24 to 48 hours, we are through because the corn loses its nutrient value. It becomes a form of cheap silage. Now, that could have a devastating effect on the production of beef, pork, and poultry and every one of these commodities could be in short supply in the winter.

I heard this morning that beef prices are down due to consumer resistance and I think that will happen for a while. Two things are happening. They are going to flood a lot of beef into the market, into the slaughterhouses and into the stockyards. There will be consumer resistance for a while but it is well-known that later on this year we could have a rise in those prices caused by a smaller number of calves

during the year and not only this year but 2 years ago, because the cycle is what counts in beef production.

Now, if we lose 15 percent of our corn crop due to the failure to obtain propane, I predict in this committee meeting—I have been right before, and I predict again—that it will burst the ceiling out of food prices on every one of the perishable commodities that are in the protein area, in the turkeys, poultry, dairy products, eggs, beef, all animals that are fed.

Now, we cannot take that chance and we are fighting for time, Mr. Ligon. I am saying this for the record and using you in a sense as a backdrop for it because we have just got to have it.

Now, I have written to Governor Love until I have run out of postage. I have been actually sending him airmail letters, you know, special delivery. I was in Minnesota and every time I would meet somebody I would send him another letter. I have written to the President. Good Lord, the President did not know what a soybean looked like here a while ago. I just could not believe that. I am going to send him a corn cob. [Laughter.]

We have got to have some action. We have just got to have it. And I know that you have got my story. I have been on your back enough so you must feel I am your enemy instead of your friend, but I have just got to plead with you for it. There is no substitute for it.

Again, I want to say with Congressman Carey, all of these esoteric arguments that we can convert to this and that are fine, but may not be practical in the short run. For example, in public utilities we have conversion now from gas to oil, but the coal boilers are out. You do not put in a new coal boiler overnight. You can talk; it is nice to get all this out here, and there is lots of baloney being spread about—I should not say baloney, that is too expensive—there is lots of hot air being spread about this stuff. But you cannot convert Northern States Power Co. in my State, for example, back to coal in the next 2 to 3 months. They either use natural gas or some form of fuel oil, either No. 6 or 4. That is what they are using. The old boilers have been taken out. I mean the coal burners are out. You cannot convert the homes to a furnace that can use coal. You cannot do it. They are either gas or oil. And all of these conservation measures are good. Yes, we can turn down the thermostat. That we can do, and we can tell these automobile companies to quit making bigger motors.

Do you know what they have done this year? In spite of a fuel shortage, the automobile consumes more this year than it did last year. We have got more horsepower, a number of them are longer. I do not know what is wrong with this automobile industry. I am beginning to wonder who runs them. I wonder if they are friends or foes. This is outrageous, outrageous. In fact, the modern car we have today, that is the little car, uses about the same amount of gasoline that a 1958 Cadillac used and we used to talk about Cadillacs being the big users. That is the economy car—the mileage the 1958 or 1960 Cadillac got.

The automobile industry has got to be brought to its senses. This is one of the large consumers of our petroleum products. Somebody is going to say they do not use fuel oil, no, but fuel oil comes out of the same barrel of crude. I think we also need to discuss the profits of gasoline. What does the company make on a gallon of gasoline as compared to a gallon of fuel oil? We are going to have Mr. Rawl from

Exxon. It is the same barrel. We do not get any more oil out of the barrel. It is just a barrel. The question is what do we get? This summer we have been able to get by pretty well with the gas problem. We have had problems in Colorado, had hundreds of independents shut down, though no one has ever been able to justify as to their sudden demise. I mean after all, killing off the independents. A gentleman in my State has been a Shell Oil dealer for 26 years and a bulk oil dealer for Shell for 32 years. A month ago this week they sent him a notice and said you are through. A nice friendly humanitarian concern, a man who has been serving the rural areas of that State for 32 years—26 in the same corner with his filling station—and they said to him that he was no longer a profitable customer.

Now, that is happening all over the State of Minnesota. You and I have gone over this.

Mr. LIGON. Yes, sir.

Chairman HUMPHREY. I think it is an outrage. I think these companies ought to be dragged in by the nape of the neck and find out what is going on around here. In the meantime, they give us no assurance that we can have any oil for our people in the winter.

We need mandatory allocations and we want them now. We should have had them last month. The law is there and you tell Governor Love with my compliments that it will not be love, that we are going to get tougher about it and I do not know what more we can do except to harass. And I appeal to your other body to get that Jackson bill out. I cosponsored that bill with Senator Jackson. We set down the priorities there. We have got to get it out.

Now, Mr. Quarles, we have got to get you in here a little bit. This is a life-or-death matter that we are talking about here. When Mr. Carey talks about his people up in New York, they do not need to read a speech. They do not even have a place to burn it. Cannot even burn that stuff any more. You know, we have got—our furnaces have been changed.

How much additional low sulfur fuel oil does EPA estimate that we would need to satisfy existing Federal-State environmental standards; that is, present ones, and how much such fuel is presently being used in areas where it is not required? You alluded to this in your statement.

Mr. QUARLES. Sir, I think it depends entirely on getting it where it is needed and the specific question you asked, how much more low sulfur fuel do we need, is simply one that cannot be answered easily.

Let me try to give you some statistics based on our analysis and perhaps we can go from there.

Substantially all of the domestically produced oil is low sulfur, and consequently, when we talk about the higher sulfur fuel which might not meet the environmental requirements, we really are talking about imported oil.

Representative CAREY. Pardon me. When you say low sulfur, would you express that in terms of percentage because low sulfur means different things to different people depending on what the State or local requirements might be.

Mr. QUARLES. Let me for general purposes of this discussion, take a level of about 0.3 percent as low sulfur.

The amount of imported oil is perhaps only 25 percent of the oil that would be used along the east coast, and the amount of domestic oil would be the other three-quarters.

Now, the analysis we have shows that more than 1 million barrels a day on the average can be more than 0.5 percent sulfur and meet the environmental requirements. In fact, the vast majority of it can be as high as equal or more than 1 percent. Roughly 850,000 barrels a day of fuel oil having a sulfur content of 1 percent or greater can be used and be in compliance with the environmental requirements. Therefore, you go back to the portion of the imported fuel which might have a high sulfur content and you are talking about only a fraction of that amount.

Consequently, in a very absolute sense the problem that we have got is one of allocation and distribution rather than one of supply.

Now, in a practical sense the problem shapes up differently because there are very complex systems for moving the fuel from where it is to where it is needed and you cannot simply say, well, we want it over here and assume it will be over there.

But, if over future years those changes could be made, then the real problem is one of where it is rather than how much we have.

Representative CAREY. Well, is it not true, if I may, Mr. Chairman, there is a distinction here in the application of standards? You are working with a highly organized segment of our national industry, the utilities companies, who have been long aware of your requirements. They have worked with you on developing the standards. You worked with them on developing source of supply. They have contracted out as best they can with the available sources of low sulfur residual. And they have worked out terminals storage and pipeline arrangements to make sure it is where it is needed at the time they need it. Here we have a highly sophisticated supply system in which you have been involved since the standards were first developed. So it is not like the other system of the school board, the homeowner or the local hospital, a spot supply basis. You have a continuing supply system in which you are constantly involved in monitoring standards. So you really have almost a mandated supply grid system that you are working with now based upon the imposition of sulfur requirements. But are you saying that?

Mr. QUARLES. Sir, I think if we are going to go on to questions, I am not with you on the premises. We are not working with the oil companies to——

Representative CAREY. I said with the utilities.

Mr. QUARLES. With the utilities?

Representative CAREY. And the States and communities. Utilities are faced with standards imposed upon them by a State, city, or Federal standard. Faced with that, they engineer, pattern, and program their production of energy to meet the standards.

Mr. QUARLES. The standards have been established over the past several years.

Representative CAREY. Right.

Mr. QUARLES. Many of these standards date back to the 1960's, some to the 1950's, before the Clean Air Act was passed. Since the 1970 amendments to the Clean Air Act were passed, there has been further State regulatory action taken. This regulatory action has been based

on an analysis of the health consequences of pollutants. From this analysis are set standards or the quality of oil that can be used and the utility, or any other consumer, has to go into the marketplace and buy fuel meeting that requirement.

Representative CAREY. But he programs that over an annual contract basis.

Mr. QUARLES. Correct.

Representative CAREY. In other words, Con Ed is covered at this moment——

Mr. QUARLES. Correct.

Representative CAREY [continuing]. For its utility in my part of the world, is covered by its residual requirements fairly well without the prospect of some interrupting from Libya or something of that kind but they are fairly well organized in having the supplies necessary to meet their even peak demand for the foreseeable future. That is not a temperature problem. That is a utility need problem based upon the utilization of power. So they are not up against the wall, so to speak, the way the user finds himself in the heating oil situation. And he can make adjustments that you are talking about and he is willing to do this if you or the State will relax the standards.

What do we need to get those standards relaxed to the degree this is practical to keep us within the parameters to protect public health, and at the same time not force them to use supplies of low sulfur that are in more desperate need elsewhere? What do we need in terms of a mechanism to get that going?

Mr. QUARLES. We do not believe that we need any further legal authority in order to address this problem and act upon it. The procedures which we are laying out now will be procedures to grant variances to the extent that it is demonstrated they are required to relax the sulfur content regulations on a temporary basis as needed. There will be an orderly procedure established whereby fuel companies or utility companies, whoever it is bumping up against the existing regulation, may apply to a State for a variance. The State would then be required to hold a public hearing, to analyze the situation as far as supply and demand are concerned, and to inquire into whether every effort has been made by the company supplying the oil to provide oil that meets the standard. If it is shown that the sulfur content restriction is the limiting factor, then we can grant a variance to permit the higher sulfur fuel to be used. We stand ready to do this.

Representative CAREY. This is my question. Are you prepared now to relax those standards to agree that the major utilities can get along entirely on some form of residual oil and will not have to go into purchasing distillates or light oil to run additional generating capacity, because that is what brings them into competition with the all-too-scarce supplies that are being administered by Mr. Ligon. Are you trying to avert in all ways possible getting utilities to buy distillates?

Mr. QUARLES. We stand ready to approve such variances as the facts show them to be needed. So in a conceptual sense, as a matter of principle, yes, we stand ready to do it.

Now, we do not stand ready to grant relaxations across the board without some evidence being submitted to show they are needed.

Representative CAREY. Here we have a practical case. Mr. Ligon's office was given a request by the utility to get permission to find a

source of 3 million barrels of oil. That is a whale of a lot of oil for a lot of homeowners if Con Ed does not need that 3 million barrels. I am trying to find out if instead of calling the broker and getting the oil at 31 cents a gallon, if Mr. Ligon could not work with your standards office to relax standards in such a way that they would not be required, use residual oil which is more generally available and not use that 3 million barrels. I am trying to get the utility off the spot and release 3 million barrels for the homeowner.

Mr. QUARLES. Right. Let us assume for purposes of the example that one obstacle standing in the path of utilities from carrying out that approach is that the sulfur content regulations would prevent the use of what they are trying to buy. They then can go to the State and request a variance.

Now, we have no authority, nor do the States, to grant these variances without a public hearing and without an orderly and effective examination of what the facts are.

Included in that examination will be an analysis of what the health need is, and if the particular utility is located where the primary standards are not involved, then it could be quite a simple matter to make the change that is required temporarily in the sulfur content regulations and permit that arrangement to go forward.

However, sir, it is important to recognize that in many of the instances that may come up, we are talking about sulfur content regulations that have been established to protect health. In such cases we are talking about the standards that apply in New York City, in Boston, and in other urban centers where the present level of sulfur oxides create a health problem and any relaxation of the standards may aggravate that health problem.

Now, notwithstanding that factor, we still stand ready to approve variances if they are needed in order to meet the emergency fuel supply problems. But we do not want to grant those variances until it is clear, first, that they are needed, and secondly, that the need is one which cannot easily be solved in some other way.

Representative CAREY. I am convinced—and I am instructed your mind is open on this—that you are positive about looking at these variances on the basis of need and I am hopeful that you have the machinery set. These public hearings can be expedited where the need is clear and explicit to move ahead. We cannot have another shortage we do not need.

Mr. QUARLES. Yes, sir. We have procedures being established and we will take whatever action is required to make sure that the environmental standards do not stand in the way of solving this problem on a temporary basis. We only ask at the same time that efforts be made to make sure we do not get into this box again because we are in a sense bailing out a problem that is not of our making by relaxing requirements which we feel are extremely important to protect the health of the public.

Chairman HUMPHREY. Thank you very much, Mr. Quarles, and thank you, Mr. Ligon. We thank you for your time and your helpfulness here and appreciate the advice that you have given us.

Our next witness will be Mr. Rawl, who is the senior vice president of Exxon Co., who has been waiting for some time. If Mr. Rawl will come forward, we would appreciate it.

Mr. Rawl, do you have associates with you?

Mr. RAWL. I have them back here, Senator.

Chairman HUMPHREY. Would you like them——

Mr. RAWL. No.

Chairman HUMPHREY. Thank you very much.

Proceed, Mr. Rawl, and thank you for your patience here. We have your prepared statement. I gather you would like to read the prepared statement.

Mr. RAWL. Yes, sir. But I will shorten it. In the interest of time I will skip significant parts of it, but I would like to have it put in the record.

Chairman HUMPHREY. Please do. The entire prepared statement will be included in the record.

Mr. RAWL. Thank you very much, Mr. Chairman.

STATEMENT OF L. G. RAWL, SENIOR VICE PRESIDENT, EXXON CO., U.S.A.

Mr. RAWL. I am L. G. Rawl, senior vice president of Exxon Co., U.S.A.

As you have suggested in your invitation to testify here today, I plan to give you our current assessment of the outlook for fuel oils in the United States this coming winter. However, I certainly support your concern about the long-term future. It looks pretty bleak.

I would first like to review briefly some background information which should facilitate the subsequent discussion.

I think it would be useful to review three major developments in the energy industries which have brought us to where we are today.

The first development is the rapid growth of petroleum demand in this country, which in the past 18 months has been at an annual rate of 7 percent. This is a growth rate 40 percent higher than the 5 percent per year average from 1965 to 1971. This accelerated increase in demand was caused by a number of things:

(1) Increased gasoline consumption due to rapid growth in the number of new cars on the road using significantly more gasoline per mile because of emission control devices and lower compression ratios;

(2) An increasing shortage of natural gas, generally attributed to unrealistic price regulation for many years by the FPC, which has both artificially stimulated demand and discouraged exploration for new reserves;

(3) New air quality regulations which have restricted the use of coal, our most plentiful energy resource; and

(4) Substantial delays in the startup of nuclear generating capacity.

These last three items, plus restrictions on the use of higher sulfur fuel——

Chairman HUMPHREY. Mr. Rawl, have you seen this publication?

Mr. RAWL. No, sir.

Chairman HUMPHREY. I would urge you to get it. This is the one that has been put out by the Georgetown Center for Strategic and International Studies. It is the report of the Joint Committee on Atomic Energy. It is the most revealing publication that has been made on the energy situation, the projections up to the years 1975, 1980, 1985, 1990, and the year 2000, and much of what I read in other areas is to be found in here in graph and chart.

One of these days we are going to bring the technician in here to tell us about it. And if this matter, for example—startup of nuclear generating capacity, all these problems that you allude to, are carefully defined in here and charted.

Mr. RAWL. I heard your comments earlier on that subject and I am quite interested. I intend to get a copy of it.

Chairman HUMPHREY. It is just out, as a matter of fact.

Mr. RAWL. The last three matters mentioned, plus restrictions on the use of higher sulfur fuel oil, which was mentioned earlier, have caused a significant and, to some extent, unanticipated increase in demand for distillate fuels and low sulfur fuel oil by industrial and utility consumers.

The second development is in the area of refining capacity.

The relatively slow pace of refinery capacity growth, particularly in the last 2 years, was caused by uncertainties over crude supplies and the future structure of import controls; uncertainty about future environmental regulations, some of which required higher investment costs and different equipment needs for refining facilities, and the almost insurmountable difficulty in some areas of obtaining local government approval for new refinery sites. All of these factors tended to inhibit investment in refineries, or at least to defer the investment decisions.

The third major development relating to the current situation is the outlook for crude oil supplies. In the United States, for over a year now, crude production has been at full efficient capacity, and domestic production rates have begun to decline.

As a matter of record, domestic crude producing capacity has been insufficient to fill U.S. refineries since 1971. This gap can be closed only by importing foreign crude. But world demand for oil has been increasing at an even faster rate than in the United States. As a result, spare producing capacity in the free world has dropped to essentially zero.

Concurrent with the disappearance of worldwide spare producing capacity, foreign crude prices have risen rapidly; today the cost of foreign crude delivered in this country is considerably higher than domestic crude.

Finally, political interference with crude oil supply in foreign producing countries has occurred, and we should not assume that this problem will necessarily disappear in the future.

In addition to the developments which I have discussed, government programs and policy have had a direct and adverse impact on possible solutions to the Nation's current energy problems. I would like to discuss briefly how these government actions have affected the energy situation.

FPC control of natural gas prices at unrealistically low levels for many years has artificially encouraged consumption and waste while discouraging the exploration needed to replace gas reserves as they are consumed. Today we have a natural gas shortage—the inevitable result of unrealistic price controls on a critical energy resource.

Furthermore, recent attempts by the FPC to improve incentives for gas exploration have continued to meet significant resistance in some quarters.

The Federal Government has been administering a program of controls on petroleum imports for a number of years. However, continued threats of elimination of controls, exemptions, and generally inconsistent and ineffective administration of the oil imports controls program from its inception have created an atmosphere of uncertainty which has tended to discourage domestic investments in exploration and refining.

Various efforts at price controls have contributed little more than added difficulties in the energy industries. While we all recognize the desirability of controlling inflation, we also must recognize that price controls on energy tend to encourage consumption and discourage the development of increased supplies.

We have expressed our concern that the phase III program earlier this year did tend to discourage the development of additional supplies by imposing wholesale price controls on 23 selected petroleum companies. But this program was ineffective in controlling inflation because retail prices, which are set by independent dealers rather than the oil companies, were allowed to rise without limitation.

Now we are entering phase 4. We have expressed our strong concern to the Cost of Living Council that the phase 4 rules, as originally promulgated, would have a major adverse effect on petroleum supplies. The recent changes in these rules have removed a major impediment to the importation of foreign heating oil by providing a passthrough to the consumer of the higher cost of these supplies on an averaged-in basis. We are very much concerned about the two-tier pricing system for domestic crude oil which, in our judgment is a setback to conservation practices in the industry, and is unfair to current producers and royalty owners.

It could also have an adverse effect on the production of so-called old oil, as defined by the CLC, and could cause disruption and inefficiency in crude oil markets and add further uncertainty to the petroleum business.

We have to conclude that energy shortages are the inevitable result of a long-standing climate created by a large number of uncoordinated legislative and regulatory controls impinging on energy industries from all directions.

Chairman HUMPHREY. Mr. Rawl, that was what I was alluding to without trying to assess blame or anything, to a lack of a coordinated mechanism in our Government and the executive and legislative level to come to some understanding about what needs to be done. We are all out here on our own hunting expedition, so to speak, you know.

Mr. RAWL. Yes, sir.

Chairman HUMPHREY. And when you get into a critical situation like this, you generally look for scapegoats rather than getting at the real center of the problem, and I think that it is imperative now that—and I mean on an immediate basis—there be some meeting of the minds between the people at the executive level of Government, those in the legislature and the industry itself, so we can go ahead and do some of the things that need to be done in exploration and development, and see whether we can increase supply, take a look at the relationship of price to supply, the tax program to exploration and development.

I think most of us here recognize that we have been dealing with this subject matter in a piecemeal and sometimes a parochial base or interest, and we need to get at it in a much more sensible coordinated effort. This is what I have been crying out for as a Senator. I mean I am perfectly willing to take a look at the whole tax structure as it relates as a means of incentive, the whole business of whether or not the Cost of Living Council is standing in the way of an adequate flow of supply.

Everybody knows the cost of energy is going up and it is going to go up considerably. Our retailers out in the countryside are terribly upset about the fact that crude prices go up, the refiners get an increase, and then they cannot get it at the other end of the line, I mean at the retail level.

All of these things, it seems to me, necessitate a much more systematic approach. I do not know how better to put it. I mean just looking at it on the basis of a group of men in public life, men and women that have responsibilities.

Mr. RAWL. We would agree wholeheartedly, Mr. Chairman, with that suggestion.

Chairman HUMPHREY. Your representatives meeting with the different groups here I would hope would try to get some kind of a summit conference at home on energy. I mean, you know, we meet with the Russians and the Chinese, all that kind of business. Nobody wants to meet with us. You know, it would be kind of good for us to sit down and take a look at this picture and see what we are going to do, not just next winter but what are we going to do down the line, because companies like yours, great international companies, have international problems, domestic needs.

I am not interested in just trying to find out whether you are bad boys. That is not the central issue here. The question is on supply.

Mr. RAWL. Yes, sir, we have tried to bring to the attention of many agencies the fact that frequently these controls have limited objectives which are frequently attained. However, these limited objectives have a detrimental effect on other types of things, such as supply, so I certainly would support taking this approach.

The outlook for this winter, then, from our view, is not too different from what Mr. Ligon said.

The U.S. fuel oil situation for the approaching winter must be viewed in the framework of the overall free world supply/demand outlook for petroleum. This fact leaves us in the position of attempting to judge the outcome of a number of factors beyond the control of the U.S. petroleum industry and, in some instances, the U.S. Government as well.

Some of the more significant of these factors affecting the petroleum supply/demand balance are weather—both in the United States and in Europe; environmental regulations; other U.S. governmental actions such as price controls, mandatory allocations, congressional action and, finally, and perhaps the most critical in our view, foreign economic and political developments.

Our best assessment of the overall picture is that U.S. and other Western Hemisphere refineries will operate this winter at high utilization rates, unless further restricted by lack of proper quality crude to process. An increased flow of products will be required from Eastern Hemisphere sources.

On a worldwide basis, there will be little spare refining capacity this winter, and that being principally in the Far East and Persian Gulf where it is of little value to the United States. Crude availability is expected to be even tighter than refining capacity this winter, with what spare there is being heavy, high-sulfur crude. A curtailment in any producing country this winter could cause a shortage of crude and create significant disruptions in the logistics system.

The growing dependence of the United States on both Eastern Hemisphere crude and Eastern Hemisphere products, coupled with anticipated demand growth in this country, has resulted in an extremely tight ship tonnage balance as well for this winter, and spot charter rates for available tankers are extremely high.

In summary, we anticipate that worldwide refining, crude production and shipping capacity will be fully utilized this winter if anticipated demands materialize and are to be satisfied. Reflecting this situation, prices of crude and especially products in world markets will be well above the levels at which domestic prices are being controlled. Recent international developments have emphasized the possibility that this balance could deteriorate to a shortage situation rapidly. A very cold winter in the United States or Europe could lead to the same result.

With this general background in mind, I would like to turn first to our assessment of the winter distillate fuel balances for industry in the area east of the Rockies—PAD I–IV—which is our principal area of operation.

The current industry situation is that refinery crude runs have been at very high levels all summer as the industry strained to meet motor gasoline demands. The attendant distillate production has increased inventories to a level somewhat above that reported by the Bureau of Mines for the same period last year.

U.S. refinery crude runs east of the Rockies for the first half of 1973 were at a level of 10.4 million barrels a day; 8 percent above that for the same period in 1972.

Chairman HUMPHREY. You have in your prepared statement that this level is considerably below what you consider to be normal; is that right?

Mr. RAWL. Yes, sir. And, of course, normal level is based on our estimate of the increased demand and the fact that you really should have higher inventories than you had last year because demand is up considerably. You noted that earlier.

We have forecast crude runs at 10.7 million barrels a day for the winter period, which should result in distillate production of about 495 million barrels. It also appears reasonable that inventory on October 1 may achieve a level of about 185 million barrels, some 8 million barrels over last year, and may peak in mid-November at about 195 million barrels. To meet projected winter distillate demands of 670 million barrels, assuming normal weather, would then require 80 million barrels of imports—450,000 barrels a day during the fourth quarter of 1973 and the first quarter of 1974—an increase of 10 percent over last year.

The foregoing analysis of the winter supply/demand balance indicates a very tight situation with the possibility of localized difficulties. Unfortunately, it is our judgment that this analysis is more likely to

be optimistic than conservative. A number of factors could influence this judgment:

(1) Although primary distillate inventories remain above last year's level, they have not increased over the last several weeks at a rate that assures meeting the fall inventory target.

(2) There is essentially no spare capacity in any phase of the supply system to allow making up lost production and, therefore, any problems will result in a decrease in supplies.

(3) Colder than normal weather in the United States could result in direct increases in distillate demand.

(4) Any major unpredicted U.S. refinery shutdown for repairs, due to sustained operating rates higher than normal, would reduce supplies.

(5) A shortfall in the required level of imports, for any reason, would result in a greater than anticipated drawdown of inventory early in the winter.

I would like to comment next very briefly on the outlook for heavy fuel oil.

The overall petroleum supply/demand factors that I reviewed initially apply to heavy fuel oil as well as distillates. These indications point to a continued tight supply outlook for this product, especially for low sulfur heavy fuel oil. Limited supplies of low sulfur crudes, coupled with stringent sulfur regulations in the United States, are major factors influencing the low sulfur fuel oil balance.

Winter demand for heavy fuel oil is forecast to be about 530 million barrels east of the Rockies, an increase of 13 percent over the same period last year. Heavy fuel oil production from U.S. refineries this winter is expected to be about 115 million barrels.

Estimated normal weather demand exceeds domestic production and inventory drawdown by 390 million barrels—slightly over 2,150,000 barrels a day, or 73 percent of demand—and will have to be met with imports. This winter's import requirement exceeds that of last winter by about 12 percent.

Most of the increased demand for foreign heavy fuel is in the low sulfur grades; I will define that as 1 percent sulfur or less.

This year, low sulfur fuel oil imports will have to exceed last winter by a substantial amount to meet demand which is consistent with current environmental regulations. Overall, we see a low sulfur fuel oil outlook similar to distillate—a very tight balance with the possibility of localized difficulties. Higher sulfur grades are not as supply-limited and could supplement low sulfur fuel oil demands, providing some relaxation on sulfur content is allowed.

Also, we are seriously concerned about the effect of crude curtailment on our winter projection. Light, sweet crude is a key to the winter distillate and heavy fuel oil program for the industry.

Let me turn now to my own company's supply outlook. Exxon Co., U.S.A., has been very successful in its refining operations during this summer, with runs exceeding rated calendar day capacity. However, because of tight worldwide crude balances, we are already having increasing difficulty in obtaining foreign crudes to replace our declining domestic supplies. Nevertheless, our operations to date, together with present plans, are expected to result in availability of appreciably more total refined products during the current seasonal year than for

the previous year. We must be concerned, however, that any further deterioration in the world crude oil supply picture would impair our ability to reach this objective.

Our 1973–74 distillate fuel contracts with resellers include allowances for some growth and have been designed to encourage maximum summer purchases in order to move as much distillate as practicable into resellers' storage tanks before this winter.

I might mention that so far this summer, or through July, we moved an additional 3.6 million barrels into resellers' storage, which is up 42 percent over that same period last year.

Chairman HUMPHREY. That is your company?

Mr. RAWL. Our company into our resellers' storage, terminal operators, oil or heating oil dealers, and people such as that. That is our company, right.

Also, based on assumed continued favorable refinery operations and availability of crude oil, we anticipate entering the forthcoming winter with our distillate fuel tankage full. Our total distillate supplies for the seasonal year April 1973, through March 1974, are expected to exceed the previous year by a substantial amount. This would be about 7+ percent, and we feel that we will be able to fulfill all of our contractual commitments to our customers.

In summary, we project our winter distillate position as tight but workable if unforeseen events do not turn too much against us.

For heavy fuel oil, our supply outlook is expected to be tight for the winter ahead but, barring operating problems, we currently expect to be able to meet our contractual commitments of both regular and low sulfur fuel oil. Our sales for the seasonal year April 1973, through March 1974, are expected to exceed the previous year by approximately 8 percent.

We have a certain number of recommendations for action here. We have described a potentially very difficult energy situation in the United States for this coming winter. The next question is, obviously, what can be done to improve this situation?

In the immediate future, the only real possibility for increasing petroleum supplies is to increase imports—imports of crude oil to insure that all available U.S. refining capacity is utilized to the extent possible, and imports of products to meet remaining needs. In order to insure the maximum utilization of available foreign supplies, temporary relaxation of certain environmental regulation appears to be necessary. These include:

First, prompt relaxation of heating oil sulfur specifications to permit greater imports of Eastern hemisphere supplies, which are higher in sulfur content than required in most areas of the Northeast, which are generally in the 0.20 to 0.3 percent sulfur by weight category, while European supplies are in the range of half a percent to seven-tenths percent.

Chairman HUMPHREY. You consider that a health hazard, that variable?

Mr. RAWL. No, sir. I would hope that when you consider the amount of domestic heating oil that will be in place and the fact that these supplies will be marginal supplies and some of those, of course, will meet the standards, I would not consider it unusual.

Chairman HUMPHREY. Some of them can be mixed, can they not?

Mr. RAWL. Yes, sir.

Chairman HUMPHREY. By the way, when you listened to Mr. Quarles, did you sense there that this particular suggestion here would meet with some favorable reaction?

Mr. RAWL. I guess my reaction was that he was talking principally about heavy fuel oil and utilities. I would hope this suggestion would meet with favorable reaction.

I think the basic problem we have in terms of the EPA situation is that frequently these restrictions are State restrictions.

Chairman HUMPHREY. Yes.

Mr. RAWL. So that we will have to depend on EPA, I suppose, to work with the States.

Chairman HUMPHREY. Now, some of these States have it in the law that would require legislative action, and some of them, it is through their environmental control commission or officer, that would require administrative relief.

Mr. RAWL. Yes, sir.

I think in the case of some of these laws they make provision for certain kinds of variances, however.

Chairman HUMPHREY. For emergencies?

Mr. RAWL. Hopefully we could secure some of those.

Second, relaxing heavy fuel oil sulfur specifications. This is important. Additional regular sulfur fuel oil supplies probably could be produced if steps are taken now to relax temporarily existing regulations on fuel oil sulfur content.

Once again I would expect that these additional volumes would be small in total as compared to the total low sulfur fuel oil burned in a certain air shed and hopefully that would not increase emissions in terms of sulfur too much.

Chairman HUMPHREY. In other words, these areas that you are talking about are what you might call the emergency marginal provisions——

Mr. RAWL. Yes, sir.

Chairman HUMPHREY [continuing]. To meet unpredictable conditions such as more severe weather, possibly some bottlenecks to transportation or some labor-management disputes or refinery malfunctioning.

Mr. RAWL. And basically I would say the significant one would be the weather change.

Chairman HUMPHREY. Yes.

Mr. RAWL. And hopefully this has one other impact. Many refineries in the Caribbean run sweet crude, which is in very short supply. If there was a higher level placed on these environmental sulfur regulations to where maybe they could run more high sulfur crude, which is generally more available, this might permit more of this sweet crude to be made available to other parts of the country where hopefully these refineries that cannot run the sour crude could be brought up to higher utilization.

Chairman HUMPHREY. That is the technical point, that some of your refineries cannot run a sour crude, is that right, or cannot run a sweet crude?

There are different types of refineries?

Mr. RAWL. Yes, sir. Any refinery can run a sweet crude, but there are a number of refineries in this country where, fortunately, a large amount of our domestic crude has been sweet and they are designed to run it. They cannot, for metallurgical reasons, run sour crude.

Third, the standards for SO_2 emissions from electric utility operating plants could be temporarily relaxed to permit the continued use of coal, or reconversion from fuel oil to coal where facilities permit.

I heard your comments about the utility in your home State and this is the case in a large number of areas. However, in certain places there are certain utilities which still have the capability to switch back to coal. They have recently gone to oil, for example.

Fourth, relaxing refinery SO_2 emission standards. This would enable a number of refineries to substitute some high sulfur crude for low sulfur crude.

Again, I will emphasize that these are temporary measures to alleviate a difficult situation; we are not recommending a change in our national environmental goals.

Energy conservation can and should be a part of our Nation's efforts to solve its energy problems.

I would certainly agree with you, however, that in the short term we are limited pretty much to turning down the thermostat in the wintertime. I might mention, however, in Exxon we have been able to put together a program which should reduce our heat requirements some 15 percent in our refining and production operations in the next 2-year period, and that is on top of an operation which for cost reasons is already pretty well integrated from the heat standpoint.

Various proposals have been offered recently to allocate petroleum supplies, with the objectives of assuring that priority and essential needs are met, and in some instances to protect supplies for various segments of the industry. It is important to assess carefully the effects that programs to allocate supplies can have on a refining and distribution system widely forecast to be stretched to the limit of its capacity for at least several years.

It is most important to recognize that allocation programs—and I would make the point here at the wholesale level——

Chairman HUMPHREY. Yes, sir.

Mr. RAWL [continuing]. Do not deal with the fundamentals of the problem—they neither produce more supplies nor reduce demand—I think that has already been said today—and probably will not take care of the consumer in many cases and for the reason you expressed earlier. Because they will inevitably result in dislocation of existing supply patterns and create burdensome and time-consuming bureaucratic regulations, there is a strong probability that a mandatory allocation program will reduce available supplies and compromise the industry's ability to respond rapidly to critical needs. This can only aggravate the very problem the program is designed to solve.

I would like to express my own opinion here, that frequently the programs we have seen, many of those control programs, sounded very good when the intentions were expressed but after we saw the formulas and the procedures we had to go through, it created a significant number of problems for the industry in terms of making it come out to meet the obectives that were expressed originally.

This is particularly true with respect to allocating crude oil.

I would like to make a point here. As I have stated earlier, total available supplies appear to be barely adequate to fill current refining capacity for the coming winter. Unquestionably the highest priority must be given to producing the maximum possible volume of refined products to meet expected demand. A program which disturbs the complex crude supply system in such a critical time will undoubtedly result in significant losses in industry capacity.

As I mentioned earlier, Mr. Chairman, we in Exxon are running our refineries all out. We have an interesting situation where with 10 percent of the industry's refining capacity, we supply 18 percent of the heating oil in District 1. So to the extent——

Chairman HUMPHREY. District 1 is the east?

Mr. RAWL. East coast, yes, sir.

We are almost insignificant in the Midwestern part of the country.

Chairman HUMPHREY. I am sorry to hear that because you were saying you were going to take care of all your customers and I was going to come back to that a little later.

Mr. RAWL. I knew you would get to that. That is why I thought I would mention it.

For example, with 18 percent of the business up and down the east coast and in some States substantially more than that if an allocation takes a barrel of crude from our company and gives it to someone else who either makes distillates and takes them to a different geographic area or runs it to a higher percent of gasoline than we would, it could very well aggravate the situation.

I will cite another example.

I know you have heard a lot from the terminal operators up in the Northeast. We are in the fortunate position of being able to give those fellows what they got from us last year plus a little more. We have about 30 percent of that business. So, although we have roughly 10 percent total U.S. product supply, when you get into certain specific classes of trade the figures vary. Then if you start allocation, these are the kinds of things that aggravate our problems. We say that the Government has to look specifically at all the details of one of the programs rather than just writing down some things that look pretty good. Congressman Carey mentioned the fact that this is an exceedingly complex industry and, as you know, the comments you made on propane are a good example of that.

Chairman HUMPHREY. Yes.

Mr. RAWL. These are the kinds of things that we feel strongly have to be seriously considered before an administrative procedure is set up to take care of some of these problems.

Chairman HUMPHREY. Well, I agree with that and that is why I said if there was going to be a mandatory allocation program, you have to get tooled up for it and know what you are doing because it is easy to talk about it and make the general commentary, but how to make that work without additional dislocations I think is a very difficult problem.

Now, we do not have any easy choices to make here at all. It is a tough choice. There is a tight supply and the question is between the voluntary type program and the mandatory program. Both of them have limitations, but I am of the opinion—this is my personal opinion—that we ought to go to the mandatory program but we ought

not to go to it like on Tuesday and start it on Wednesday because that would just bring a form of chaos, I am sure, within the industry.

We have to make up our minds what we are going to do and then go through the procedure of refining whatever administrative structure this is before it is put to work, and also refining the regulations before they are put to work.

Too often these programs are mandated and they are activated and then afterwards we spend all our time trying to repair the damage. I would prefer that we mandate one and then get it organized so that we can use it. That is my view of it anway and it is going to take some time, and when I look at the cold weather in our part of the country, I know that the time to get prepared, like the squirrels have found out long before mankind, is in the summer and the fall, rather than waiting for the winter, because the chestnuts are not very available about that time.

Mr. RAWL. Any Government actions should be limited to those last increments of supply which must be redirected to meet essential needs of the ultimate consumer. Essential needs should be carefully defined and verified and the limited program employed only when absolutely necessary.

Now, turning to the longer term, the No. 1 priority of this country's energy efforts should be the development of additional domestic sources of supply—you mentioned that earlier today.

It is generally agreed among scientific and technical experts in energy fields that the United States has a potentially adequate energy resource base. An obvious prerequisite in the development of these resources is a proper economic and regulatory framework.

In this regard, the first requirement is the maintenance of a competitive, private enterprise system, which is the best way to assure satisfaction of the Nation's needs in the most efficient way possible.

A second requirement is that industry must be allowed access to the resources. Much of the Nation's energy potential, including oil and gas reserves, uranium, coal and shale deposits, is located in the Federal domain. Thus the Government role is critical in determining its availability for discovery and development.

A corollary requirement in this area is the expediting of congressional and court clearance to unlock already discovered oil reserves on Alaska's North Slope and in the Santa Barbara Channel of offshore California.

Third, industry needs a reasonable expectation of adequate return on its investments in energy resources development. Very simply, this means that prices for energy supplies must be allowed to seek levels which will provide the capital funds required to find and develop new energy resources. And capital requirements in the petroleum industry are immense.

For example, First National City Bank of New York estimates that close to $150 billion in capital outlays will be required in the 1970's for finding and developing petroleum reserves, refining, and distribution in the United States alone. This is at the rate of about $15 billion a year, compared to rates of about $7 to $8 billion a year in the 1960's. So that is the way this capital requirement has gone up.

Fourth, the importance of energy research and development is unquestioned. Profit-motivated private research should be encouraged.

Protection of the environment must continue to be a prime objective in developing our domestic energy supplies. We support the need for the Nation to set goals for environmental quality. However, environmental actions during the past 4 to 5 years have had a substantial and largely unanticipated impact on the Nation's system of energy supply.

We believe the time has come for the country to take a second look at its timetable for environmental improvement.

We do not suggest that environmental goals be abandoned; what we do suggest is that the energy situation is sufficiently severe that consideration should be given to taking more time to reach ultimate air quality goals.

Energy conservation should continue to be stressed in the long term, including both consumer measures to use energy more wisely, and industry programs to increase efficiency.

It has become apparent that in the area of energy development and use, and in all of those other areas which relate to energy, the Nation must have clearly established long term objectives and goals. Government policy and programs to implement that policy must be consistent with those goals, and must be stable and dependable in administration.

Up to now, short term problems have been dealt with by a fragmented, ad hoc approach by all elements of society—industry, the Government, and the public. This has produced a climate of such uncertainty that the private energy industries have been constrained from making the needed investments in energy resources and facilities. The future climate must improve, or our current energy problems will only become worse as time goes on.

Thank you very much.

Chairman HUMPHREY. Thank you, Mr. Rawl.

[The prepared statement of Mr. Rawl follows:]

PREPARED STATEMENT OF L. G. RAWL

Mr. Chairman, I am L. G. Rawl, Senior Vice President of Exxon Company, U.S.A. As you have suggested in your invitation to testify here today, I plan to give you our current assessment of the outlook for fuel oils in the U.S. this coming winter. However, I would first like to review briefly some background information which should facilitate the subsequent discussion.

I should state at the beginning that the possibility of fuel oil shortages has been anticipated by Exxon and others in the petroleum industry and the government for some time now. Exxon has said this in testimony before committees of Congress, in meetings with federal departments, and in public statements. We cannot claim to have predicted precisely when energy supplies would become inadequate to cover total demand, but we did define several years ago the emerging situation as one that—if not corrected—would soon cause problems. We said that time was running out. Now, suddenly, time has run out; the abundance of energy we have enjoyed for so long is no longer either available or inexpensive.

BACKGROUND

I think it would be useful to review three major developments in the energy industries which have brought us to where we are today.

The first development is the rapid growth of petroleum demand in this country, which in the past 18 months has been at an annual rate of 7%. This is a growth rate 40% higher than the 5% per year average from 1965 to 1971. This accelerated increase in demand was caused by a number of things:

(1) Increased gasoline consumption due to rapid growth in the number of new cars on the road using significantly more gasoline per mile because of

emission control devices, lower compression ratios, and more fuel consuming equipment such as air conditioning.

(2) An increasing shortage of natural gas, generally attributed to unrealistic price regulation for many years by the FPC, which has both artificially stimulated demand and discouraged exploration for new reserves.

(3) New air quality regulations which have restricted the use of coal, our most plentiful energy resource.

(4) And substantial delays in the startup of nuclear generating capacity.

These last three items, plus restrictions on the use of higher sulfur fuel oil, have caused a significant and to some extent unanticipated increase in demand for distillate fuels and low sulfur fuel oil by industrial and utility consumers.

The second development is in the area of refining capacity. In recent years the rate of increase in refining capacity east of the Rockies has been less than half the rate at which product demands have grown. As recently as 1971, there was perhaps 500 MB/D spare refining capacity in the U.S. But today all this capacity is being utilized to the extent possible, and the disparity between U.S. product requirements and the capacity of U.S. refineries to make these products has been increasing.

This relatively slow pace of refinery capacity growth, particularly in the last two years, was caused by uncertainties over crude supplies and the future structure of import controls; uncertainty about future environmental regulations, some of which required higher investment costs and different equipment needs for refining facilities; and the almost insurmountable difficulty in some areas of obtaining local government approval for new refinery sites. All of these factors tended to inhibit investment in refineries, or at least to defer the investment decisions.

The third major development relating to the current situation is the outlook for crude oil supplies. In the United States, for over a year now, crude production has been at full efficient capacity, and domestic production rates have begun to decline. As a matter of record, domestic crude producing capacity has been insufficient to fill U.S. refineries since 1971. Thus there is today a significant and growing gap between domestic crude oil production and the volume of crude required to fill U.S. refineries. This gap can be closed only by importing foreign crude. But, world demand for oil has been increasing at an even faster rate than in the U.S. As a result, spare producing capacity in the free world has dropped to essentially zero. Further complicating this problem is the fact that the limited spare foreign supplies which may be available are mainly high sulfur heavy crudes, while there are shortages of the lighter low sulfur crudes for which most U.S. refineries were originally designed.

Concurrent with the disappearance of worldwide spare producing capacity, foreign crude prices have risen rapidly; today the cost of foreign crude delivered in this country is considerably higher than domestic crude. Under Phase IV rules, this difference is likely to increase substantially in the future. Finally, political interference with crude oil supply in foreign producing countries has occurred, and we should not assume that this problem will necessarily disappear in the future.

In addition to the developments which I have discussed, government programs and policy have had a direct and adverse impact on possible solutions to the nations current energy problems. I would like to discuss briefly how these government actions have affected the energy situation.

Control of natural gas prices at unrealistically low levels for many years has artificially encouraged consumption and waste while discouraging the exploration needed to replace gas reserves as they are consumed. Today we have a natural gas shortage—the inevitable result of unrealistic price controls on a critical energy resource. Furthermore, recent attempts by the FPC to improve incentives for gas exploration have continued to meet significant resistance in some quarters.

The tax reform act of 1969 increased the tax burden on the petroleum industry by more than $500 million annually. These increased tax costs were concentrated in the areas of exploration and production, further reducing investment incentives at a time when added incentives were needed.

The federal government has been administering a program of controls on petroleum imports for a number of years. The basic justification for this program was theoretically to ensure the continuation of a strong domestic petroleum industry. However, continued threats of elimination of controls, exemptions, and generally inconsistent and ineffective administration of the oil imports controls

program from its inception have created an atmosphere of uncertainty which has tended to discourage domestic investments in exploration and refining. Now we have the anachronism of import fees being charged on imported crude oil when there is no alternative source of supply, and when these imports are already at much higher prices than domestic supplies.

Various efforts at price controls have contributed little more than added difficulties in the energy industries. While we all recognize the desirability of controlling inflation, we also must recognize that price controls on energy tend to encourage consumption and discourage the development of increased supplies.

The Phase III program earlier this year did tend to discourage the development of additional supplies by imposing wholesale price controls on a selected 23 petroleum companies. But this program was ineffective in controlling inflation because retail prices, which are set by independent dealers rather than the oil companies, were allowed to rise without limitation.

Now we are entering Phase IV. We have expressed our strong concern to the Cost of Living Council that the Phase IV rules, as originally promulgated, would have a major adverse effect on petroleum supplies. The recent changes in these rules have removed a major impediment to the importation of foreign heating oil by providing a pass-through to the consumer of the higher cost of these supplies on an averaged-in basis. However, we continue to see potentially adverse effects on the supply outlook for motor gasoline and diesel fuel because of continuation of unduly rigid price controls on these products. And we are very much concerned about the two tier pricing system for domestic crude oil, which, in our judgment, is a setback to conservation practices in the industry, and is unfair to current producers and royalty owners. It could also have an adverse effect on the production of "old" oil, as defined by the CLC, and could cause disruption and inefficiency in crude oil markets and add further uncertainty to the petroleum business.

We have to conclude that energy shortages are the inevitable result of a long standing climate created by a large number of uncoordinated legislative and regulatory controls impinging on energy industries from all directions. Government must provide for an economic and regulatory environment which encourages the development of domestic energy resources. Unless government policy is soundly conceived, stable, consistently administered, and coordinated in all its aspects, the energy industries will continue to be thwarted in their efforts to do the job that they are capable of doing.

OUTLOOK FOR THIS WINTER

Now, turning to the problems at hand, the U.S. fuel oil situation for the approaching winter must be viewed in the framework of the overall free world supply/demand outlook for petroleum. This fact leaves us in the position of attempting to judge the outcome of a number of factors beyond the control of the U.S. petroleum industry and, in some instances, the U.S. Government as well. Some of the more significant of these factors affecting the petroleum supply/demand balance are weather (both in the U.S. and in Europe); environmental regulations; other U.S. governmental actions such as price controls, mandatory allocations, Congressional action, and finally, and perhaps the most critical, foreign economic and political developments.

Our best assessment of the overall picture is that U.S. and other Western Hemisphere refiners will operate this winter at high utilization rates, unless further restricted by lack of proper quality crude to process. An increased flow of products will be required from Eastern Hemisphere sources. On a worldwide basis there will be little spare refining capacity this winter, and that being principally in the Far East and Persian Gulf where it is of little value to the U.S. Crude availability is expected to be even tighter than refining capacity this winter, with what spare there is being heavy, high sulfur crude. A curtailment in any producing country this winter could cause a shortage of crude and create significant disruptions in the logistics system.

The growing dependence of the U.S. on both Eastern Hemisphere crude and Eastern Hemisphere products, coupled with anticipated demand growth in this country, has resulted in an extremely tight ship tonnage balance as well for this winter, and spot charter rates for available tankers are extremely high. In summary, we anticipate that worldwide refining, crude production and shipping capacity will be fully utilized this winter if anticipated demands materialize and are to be satisfied. Reflecting this situation, prices of crude and especially

products in world markets will be well above the levels at which domestic prices are being controlled. Recent international developments have emphasized the possibility that this balance could deteriorate to a shortage situation rapidly. A very cold winter in the U.S. or Europe could lead to the same result.

With this general background in mind, I would like to turn first to our assessment of the winter distillate fuel balances for industry in the area East of the Rockies (PAD I–IV), which is our principal area of operation. We have no special crystal ball—we have access only to public information about the industry, and our assessment is similar to those of others who have published forecasts.

The current industry situation is that refinery crude runs have been at very high levels all summer as the industry strained to meet motor gasoline demands. The attendant distillate production has increased inventories to a level somewhat above that reported by the Bureau of Mines for the same period last year. However, this level is considerably below what we consider to be normal for the industry at this time.

U.S. refinery crude runs East of the Rockies for the first half of 1973 were at a level of 10.4 MB/D, 8% above that for the same period in 1972. We have forecast crude runs at 10.7 MB/D for the winter period, which should result in distillate production of about 495 MB. It also appears reasonable that inventory on October 1 may achieve a level of about 185 MB, some 8 MB over last year, and may peak in mid-November at about 195 MB. To meet projected winter distillate demands of 670 MB, assuming normal weather, would then require 80 MB of imports (450 MB/D during the fourth quarter of 1973 and the first quarter of 1974), an increase of 10% over last year.

The foregoing analysis of the winter supply/demand balance indicates a very tight situation with the possibility of localized difficulties. Unfortunately, it is our judgment that this analysis is more likely to be optimistic than conservative. A number of factors could influence this judgment:

(1) Although primary distillate inventories remain above last year's level, they have not increased over the last several weeks at a rate that assures meeting the fall inventory target. Also, secondary inventory levels could fall short of normal pre-winter levels by a substantial amount, as reported by Petroleum Industry Research Foundation (PIRINC).

(2) There is essentially no spare capacity in any phase of the supply system to allow making up lost production and, therefore, any problems will result in a decrease in supplies. The proportion of U.S. crude oil supplies and petroleum products that must be imported is growing rapidly (almost doubling between 1972 and 1974) and much of these supplies must come directly or indirectly from countries where the risk of unpredictable interruption is significant.

(3) Colder than normal weather in the U.S. could result in both direct increases in distillate demand and indirect increases as well, as natural gas and LPG consumers seek additional distillates as a substitute for inadequate gas supplies. Colder than normal weather in Europe, or European government embargoes, could reduce distillate supplies available for export to the U.S. Cold weather would also tax the capability of the world tanker fleet, which will be in an extremely tight balance in the normal weather case.

(4) Any major unpredicted U.S. refinery shutdown for repairs, due to sustained operating rates higher than normal, would reduce supplies.

(5) A shortfall in the required level of imports, for any reason, would result in greater than anticipated drawdown of inventory early in the winter. Inventories could then be expected to reach minimum operable levels prior to the end of the season, at a time when they are normally used to supply about 20% of demand.

I would like to comment next very briefly on the outlook for heavy fuel oil. Because heavy fuel oil is manufactured largely outside the U.S., published industry information is not as readily available to permit a detailed analysis of this winter's outlook. However, I would like to share with you some of our general thoughts concerning this product. The overall petroleum supply/demand factors that I reviewed initially apply to heavy fuel oil as well as distillates. These indications point to a continued tight supply outlook for this product, especially for low sulfur heavy fuel oil. Limited supplies of low sulfur crudes, coupled with stringent sulfur regulations in the U.S., are major factors influencing the low sulfur fuel oil balance.

Winter demand for heavy fuel oil is forecast to be about 530 MB east of the Rockies, an increase of 13% over the same period last year. Heavy fuel oil production from U.S. refineries this winter is expected to be about 115 MB.

Estimated normal weather demand exceeds domestic production and inventory drawdown by 390 MB, (2150 MB/D, or 73% of demand) and will have to be met with imports. This winter's import requirement exceeds that of last winter by about 12%.

Most of this increased demand for foreign heavy fuel oil is in the lower sulfur grades (1%S or less). Last year imports of low sulfur fuel oil averaged 1138 MB/D over the six-month winter period. This year, low sulfur fuel oil imports will have to exceed last winter by a substantial amount to meet demand which is consistent with current environmental regulations. Overall, we see a low sulfur fuel oil outlook similar to distillate—a very tight balance with the possibility of localized difficulties. Higher sulfur grades are not as supply limited and coud supplement low sulfur fuel oil demands, providing some relaxation on sulfur content is allowed. There is however, more uncertainty related to the balance itself as statistical sources are much more limited than is the case with distillate. Also, we are seriously concerned about the effect of crude curtailment on our winter projection. Light, sweet crude is a key to the winter distillate/HFO program for the industry. Heavy fuel oil consumption is also greatly affected by winter weather, and statements that I have made about consumption assume a normal winter both in Europe and the U.S.

Let me turn now to my own company's supply outlook. Exxon Company, U.S.A. has been very successful in its refining operations during this summer, with runs exceeding rated calendar day capacity. However, because of tight worldwide crude balances, we are already having increasing difficulty in obtaining foreign crudes to replace our declining domestic supplies. It now appears that availability of imported crude will limit crude runs during the upcoming winter period. Nevertheless, our operations to date, together with present plans are expected to result in availability of appreciably more total refined products during the current seasonal year than for the previous year. We must be concerned, however, that any further deterioration in the world crude supply picture would impair our ability to reach this objective.

Our 1973–74 distillate fuel contracts with resellers include allowances for some growth and have been designed to encourage maximum summer purchases in order to move as much distillate as practicable into resellers' storage tanks before this winter. Also, based on assumed continued favorable refinery operations and availability of crude oil, we anticipate entering the forthcoming winter with our distillate fuel tankage full. Our total distillate supplies for the seasonal year April 1973 through March 1974 are expected to exceed the previous year by a substantial amount, and we feel that we will be able to fulfill all of our contractual commitments to our customers. In summary, we project our winter distillate position as tight but workable if unforeseen events do not turn too much against us.

For heavy fuel oil, we are similar to industry in that essentially all of the supplies of residual fuel sold by Exxon Company, U.S.A. are obtained by purchase from the Caribbean. Our supply outlook is expected to be tight for the winter ahead, but, barring operating problems, we currently expect to be able to meet our contractual commitments of both regular and low-sulfur fuel oil. Our sales for the seasonal year April 1973 through March 1974 are expected to exceed the previous year by approximately 8%.

RECOMMENDATIONS FOR ACTION

We have described a potentially very difficult energy situation in the U.S. for this coming winter. The next question is, obviously, what can be done to improve this situation? I think we need to look at answers in two time frames—immediate actions which will have an impact over the next six months, and longer range considerations which will eventually put the entire energy situation on a sound, stable basis. In each time frame I will speak to increasing supplies, environmental controls, and energy conservation.

In the immediate future, the only real possibility for increasing petroleum supplies is to increase imports—imports of crude oil to insure that all available U.S. refining capacity is utilized to the extent possible, and imports of products to meet remaining needs. In order to insure the maximum utilization of available foreign supplies, temporary relaxation of certain environmental regulations appears to be necessary. These include:

First, prompt relaxation of heating oil sulfur specifications to permit greater imports of Eastern Hemisphere supplies, which are higher in sulfur content than required in most areas of the northeast (0.2–0.3%). Such a relaxation is essential even to achieve the level of imports which are required to meet demand.

Second, relaxing heavy fuel oil sulfur specifications. We believe the availability of low sulfur fuel oil this winter could fall short of requirements under the present sulfur regulations. Additional regular sulfur fuel oil supplies probably could be produced if steps are taken now to relax temporarily existing regulations on fuel oil sulfur content.

Third, standards for SO_2 emissions from electric utility operating plants could be temporarily relaxed to permit the continued use of coal, or reconversion from fuel oil to coal where facilities permit.

Fourth; relaxing refinery SO_2 emission standards. This would enable a number of refineries to substitute some high sulfur crude for low sulfur crude.

Again, I will emphasize that these are temporary measures to alleviate a difficult situation; we are not recommending a change in our environmental goals.

Energy conservation can and should be a part of our nation's efforts to solve its energy problems. In the near term voluntary consumer efforts to reduce overheating, overcooling, over lighting, and to avoid wasteful driving habits, are all ways in which we can conserve energy. Consumer education can play a role in these efforts, and many companies in energy industries have already initiated such programs. Energy conservation alone cannot solve all potential energy shortages, but its contribution should not be overlooked.

Various proposals have been offered recently to allocate petroleum supplies, with the objective of assuring that priority and essential needs are met, and in some instances to protect supplies for various segments of the industry. It is important to assess carefully the effects that programs to allocate supplies can have on a refining and distribution system widely forecast to be stretched to the limit of its capacity for at least several years.

It is most important to recognize that allocation programs do not deal with the fundamentals of the problem—they neither produce more supplies nor reduce demand. Because they will inevitably result in dislocation of existing supply patterns and create burdensome and time-consuming bureaucratic regulations, there is a strong probability that a mandatory allocation program will reduce available supplies and compromise the industry's ability to respond rapidly to critical needs. This can only aggravate the very problem the program is designed to solve.

This is particularly true with respect to allocating crude oil. As I have stated, total available supplies appear to be barely adequate to fill current refining capacity for the coming winter. Unquestionably the highest priority must be given to producing the maximum possible volume of refined products to meet expected demand. A program which disturbs the complex crude supply system in such a critical time will undoubtedly result in significant losses in industry capacity.

Similarly, the system for transportation, distribution, and marketing of petroleum products is also very complex. We question the practicality of substituting regulation and intervention by State or Federal Government for reliance on market forces and normal business practices to deal with most consumer energy needs. Any government actions should be limited to those last increments of supply which must be redirected to meet essential needs of the ultimate consumer. Essential needs should be carefully defined and verified and the limited program employed only when absolutely necessary.

Now turning to the longer term, the number one priority of this country's energy efforts should be the development of additional domestic sources of supply. It is generally agreed among scientific and technical experts in energy fields that the U.S. has an adequate energy resource base. An obvious prerequisite in the development of these resources is a proper economic and regulatory framework.

In this regard, the first requirement is the maintenance of a competitive, private enterprise system which is the best way to assure satisfaction of the nation's needs in the most efficient way possible. Industry has shown historically that it has the ability, given a reasonable opportunity, to provide the supplies which are needed.

A second requirement is that industry must be allowed access to the resources. Much of the nation's energy potential, including oil and gas reserves, uranium, coal and oil shale deposits, is located in the federal domain. Thus the government role is critical in determining its availability for discovery and development. Potentially productive federal acreage should be made available to industry at a rate consistent with needs. Past offerings have not been ade-

quate in size or frequency. A corollary requirement in this area is the expediting of Congressional and court clearance to unlock already discovered oil reserves on Alaska's North Slope and in the Santa Barbara Channel of offshore California.

Thirdly, industry needs a reasonable expectation of adequate return on its investments in energy resource development. Very simply, this means that prices for energy supplies must be allowed to seek levels which will provide the capital funds required to find and develop new energy resources. And capital requirements in the petroleum industry are immense. For example, First National City Bank of New York estimates that close to $150 billion in capital outlays will be required in the 1970's for finding and developing petroleum reserves, refining, and distribution in the U.S. alone.

Fourth, the importance of energy research and development is unquestioned. Profit-motivated private research should be encouraged by government policies which create a favorable environment for commercial development of the fruits of this research.

Protection of the evironment must continue to be a prime objective in developing our domestic energy supplies. We support the need for the nation to set goals for environmental quality. However, environmental actions during the past four to five years have had a substantial, and largely unanticipated impact on the nation's system of energy supply. We believe the time has come for the country to take a second look at its timetable for environmental improvement. We do not suggest that environmental goals be abandoned; what we do suggest is that the energy situation is sufficiently severe that consideration should be given to taking more time to reach ultimate air quality goals. We think that in the setting of these goals, consideration should be given to cost-benefit analysis of the last increments of environmental improvement.

Energy conservation should continue to be stressed in the long term, including both consumer measures to use energy more wisely, and industry programs to increase effiicency.

It has become apparent that in the area of energy development and use, and in all of those other areas which relate to energy, the nation must have clearly established long term objectives and goals. Government policy and programs to implement that policy must be consistent with those goals, and must be stable and dependable in administration. Up to now, short term problems have been dealt with by a fragmented, ad hoc approach by all elements of society—industry, the government, and the public. This has produced a climate of such uncertainty that the private energy industries have been constrained from making the needed investments in energy resources and facilities. The future climate *must* improve, or our current energy problems will only become worse as time goes on.

Chairman HUMPHREY. Just a few questions here. Our time is late. We appreciate your being with us today.

The Federal Power Commission, at least some of the officials over there, has suggested that natural gas producers are withholding some possible production and development in anticipation of higher prices. In other words, they are looking at what they think can be the effect of the demand for deregulation and are withholding production at this time, even though these companies are still profitmaking companies.

What is your answer to that?

Mr. RAWL. I disagree.

Well, I cannot talk for everyone in the industry, but we have pretty good knowledge of the natural gas production end of the business. We produce and sell some 6 billion cubic feet a day ourselves, half of it interstate, and I disagree wholeheartedly.

Now, I think it should be recognized that from the time a gas field is discovered, it might take a year or two, possibly more, to develop it and define it. During that period of time it may be normal for people to negotiate with someone on a sale once they get the reserves defined. So there is a possibility of some reasonably small amounts of

gas that are in the negotiation stage. But I am convinced that the need for capital, the need to get a return on investment, and the time value of money all work completely against squirreling anything way, as you say, for future use.

Chairman HUMPHREY. Now, your company, as you have indicated, of course, is a large operator in the natural gas field?

Mr. RAWL. Yes, sir.

Chairman HUMPHREY. Exxon is doing pretty good in its profit ratings, is it not?

Mr. RAWL. Yes, we have, and if you would give me the liberty of about 1-minute discussion on that, since we have heard a lot about it. I have never really had the opportunity of a good forum such as this to comment on our profits.

Chairman HUMPHREY. Go right ahead.

Mr. RAWL. Our earnings, as was indicated in the newspaper, were about $1 billion for the first half of 1973.

Chairman HUMPHREY. Is that after taxes?

Mr. RAWL. Yes, sir. That was up 48 percent over the first half of 1972.

Now, I might mention, and this was sort of mentioned in some press releases, although I am not sure any of these numbers were quoted, but in Exxon U.S.A., which is the domestic affiliate, our earnings were only up 8.5 percent on a sales increase of 12.6 percent.

Normally, as you understand, when you increase sales on a large base, you get a much higher increase in earnings than your sales increase. But, of course, we have been under price controls in this country now for 2 years. We have never approached the margin test under price controls since 1971, which is the period when we were under a margin test. Obviously, then, this large increase in earnings improvement has been in the foreign area; the facts are that over there sales were up about 11 percent and prices improved over a disastrously low value in the prior year and in prior years.

Furthermore, we are comparing with 1972 when we had a very bad first half as a company, and I think the industry basically did too.

There is another point here.

During the period from 1968 through 1972, our company's capital expenditures, excluding exploration, exceeded $2 billion per year with about half of that being made in the United States, and that is greatly in excess of the $1 billion to $1.5 billion in earnings per year that we were getting in those years.

In the first half of this year, when we had this billion dollars worth of earnings, we made capital expenditures of $800 million, with about half in the United States.

Chairman HUMPHREY. Whereabouts? About half in the United States, but the billion dollar profit was off the United States?

Mr. RAWL. We made roughly about half of that billion dollars in the United States, but our earnings in the United States, instead of being up 48 percent, were up 8½ percent.

Chairman HUMPHREY. You mean the accurate figure was a billion dollars plus, or multinational?

Mr. RAWL. Worldwide. But we have spent as a company better than 90 percent of that billion dollars profit in the first half for capital expenditures, about $800 million capital and about $100 million on

exploration. I mentioned earlier the large additions of capital that will be required in the future.

In our own company's case, because of these additions to capital since 1968, plus the debt that we had to incur to get the capital needed, our returns on investment declined over this period of time. Industry returns declined also, from 13 percent to 10 percent in 1972, which is lower than the average of all U.S. industry. So I think the point here is that this is a necessary performance to get the capital which is required. Unfortunately, when you lay that 48 percent on somebody for a half, it is an embarrassingly large number, and I appreciate your giving me the opportunity to explain some of the nuts and bolts under the earnings report.

Chairman HUMPHREY. But you are still doing pretty well profitwise.

Mr. RAWL. Still doing pretty well. I wish on Wall Street we were doing better, but we are still doing pretty well in profits.

Chairman HUMPHREY. I think it is a rather safe investment to be in your company. I would like to just go on record for that, not that everybody ever consults me on matters like that.

Mr. RAWL. I appreciate that.

Chairman HUMPHREY. Mr. Rawl, the artificial restriction of crude oil output in Texas was relaxed I believe the early part of this year.

Mr. RAWL. In 1972.

Chairman HUMPHREY. Was it last year?

Mr. RAWL. Yes.

Chairman HUMPHREY. That was to permit maximum production. That is, maximum efficient production from the wells there. Why did we not see any significant rise in output after that action was taken?

Mr. RAWL. Well, actually, it was another question of the way that a regulatory system worked. For years Texas has had a system where allocation was made to some percent of market demand factor. But the facts were that there were so many limited capacity wells involved, that when the restriction was removed on all the wells, very little additional oil came out.

The same thing happened in Louisiana last year. That was another case I think of the industry not doing a very good job of explaining the significance of these figures and what they mean to people.

I think there were some people for a long time who said that we might have had 30 percent spare capacity when, as a practical matter, we might have 5 or 10 percent spare capacity. We have had very little spare capacity in the country since the early sixties.

Chairman HUMPHREY. Yes, that is pretty well founded in the materials I mentioned here. I just wanted your comments. Very much the same situation, you know, the Department of Agriculture is now talking about releasing 22 million acres of land. That is all that is left in the set-aside program, and people are led to believe, of course, that will be all productive lands.

The real truth is, a lot of that is rocky, substandard soils, much of it uneconomic and at best I would predict here that 10 million acres will be put into crops, even with good prices, even though prices are up, so you do not have to be an efficient producer, some people are sometimes, in a sense misinformed when you say, well, you are going to take off all restrictions on plantings, for example. You take them

all off, but the farmer planted—before he set aside anything he kept the best soil. He does not stay out there and survive by being stupid, you know.

Then this last year he was told to release $42.045 million of land, and they released 45 and about 40 million was planted. That was of the second-best land.

Now you have the last 22 million acres and some of that we have up in northern Minnesota, and some of it is in other areas where there are more rocks than there are plants. So I do not think we ought to delude ourselves that they are going to plant 22 million acres more of soybeans or corn or wheat, and I gather that is the same thing that happened in the instances of some of the wells that were under restrictions.

Mr. RAWL. Yes, sir, very analogous.

Chairman HUMPHREY. The present price controls we have been told again and again by the smaller companies tend to discourage small firms with domestic oil—that without domestic oil they would have to rely on imports of some kind because they would be underpriced by firms with domestic supplies. Will large companies like Exxon do the importing and resell to independent distributors?

Now, you have heard all the arguments about these independent distributors and what if you are left up in arms? What do you plan on doing about supplying them?

Mr. RAWL. When you say "oil," are we talking about heating oil now, or fuel oil.

Chairman HUMPHREY. Well, any petroleum products.

Mr. RAWL. OK. Well, for heating oil, the rule change that I referred to earlier was that up until last week the Cost of Living Council had a rule which precluded us from taking foreign oil with its high price, which was mentioned here earlier——

Chairman HUMPHREY. Yes.

Mr. RAWL [continuing]. And rolling it, so to speak, into our total supply so that we could maybe just marginally increase the price of all heating oil. This precluded us from really selling any foreign oil to anyone because compared to domestic oil prices there is maybe 7 or 8 cents difference per gallon. We will import this year about 5 million barrels of foreign heating oil of a total 60, maybe a total of 65. So we will produce in this country 60 million barrels of relatively low-cost heating oil. We are now, since last week, permitted to roll in that 5 million barrels of high-cost heating oil so that we just marginally increase the price to all of our customers rather than being forced to sell it directly to some terminal operator, whose supplies might then be 50 percent foreign and 50 percent domestic. When he rolled it in he would have a terrible price disparity with the rest of the industry. I am sympathetic to his problem.

Chairman HUMPHREY. Can we look to your company to continue to supply some of these independent dealers, particularly in heating oil?

Mr. RAWL. Yes, sir, you certainly can. I tried to make that point earlier.

We have put into place in our company earlier this year what we call marketing principles. These principles state that we will run our refineries with the same product mix as last year despite disparities in product profits, the point which you mentioned earlier.

Chairman HUMPHREY. Yes.

Mr. RAWL. We will run our refineries with product yield in the same proportion as we did last year. Then we will take those products and we will proportionately allocate those to the classes of trade we dealt with and to the same customers we have dealt with over the past year or prior years on a proportionate basis.

Obviously that implies, of course, if you have some foreign political upset or some domestic problem or allocation, then we will have to allocate those people in the same sort of proportion also. But we intend to supply actually more product than we did last year unless we come a cropper because of some unforeseen problem.

Chairman HUMPHREY. I sure would like to stay with you a lot longer, but I have a luncheon with the President of Pakistan and I had better get on over and at least be courteous.

I have one more item I would like to mention. I just want to say that on Thursday we have a very extensive hearing here.

The witnesses will be John Dunlop, Director of the Cost of Living Council. We will have Mr. Lee White, chairman of the Energy Policy Task Force of the Consumer Federation of America and former chairman of the FPC; William F. Kenny, president of the Oil Heat Institute of Long Island, and the Governor of the State of Minnesota, Governor Wendell Anderson.

Those are all of the witnesses for Thursday.

So we will be meeting in room 4202, Dirksen Senate Office Building, in the morning at 10 o'clock.

Mr. Rawl, quickly, just on this, just because it is in the news a great deal, Arab spokesmen have recently suggested that oil companies have taken price increases considerably larger than those paid to the producing countries. A highly qualified American expert, MIT professor, Morris Adelman, stated the same thing several months ago.

Now you can move all increases in overseas prices through the—to U.S. markets, that is your passthrough under the price control mechanism in phase IV.

Your profits are, as you have indicated, high, and particularly in reference to the 1972 base.

What is your response to this charge that has been made by Professor Adelman and some of the spokesmen from the Middle East countries that have been quoted in the press?

Mr. RAWL. Of course, I am not in the international crude oil business. We have disagreed with Professor Adelman many times in the past 10 or 15 years on this and similar kinds of things.

I would say that the government take in these countries has increased substantially more than prices have. That would be my personal observation from what I read when I look at price sheets and costs.

Now, the cost in this country is not only related to the price charged in the Middle East; it is also related to freight rates; shipping has been extremely tight and the marginal ships are very, very expensive in terms of freight rates, and this also runs the costs up.

Chairman HUMPHREY. That is a factor I think that has to be noted. Do you really feel that there is going to be any interference with the supply of crude from the Middle Eastern countries?

Let's talk about the coming year, the immediate future.

Mr. RAWL. Mr. Chairman, I am probably not qualified to comment on that. I am not really in that part of the business. I am concerned over what I read in the press. It is a very tight supply situation and we are concerned, as you are, about anything that might happen.

We are worried about the weather, we are worried about what might happen to freight rates, we are worried about what might happen in any of these areas that are so important to make this thing balance.

So I would say we are greatly concerned about it.

I cannot really make a prognosis on what some of these producing countries might do. They have indicated for some time now that they are quite aggressive in pressing their demands in some of these areas.

Chairman HUMPHREY. Is it likely, however, that what you will see before you see any reduction in production is a price increase?

Mr. RAWL. I think it is likely that we will see a price increase. That would be my opinion. I really do not know—I think it would depend on their individual country's economic situation as to whether they feel like they can do anything about production.

I think it is sort of like an individual. You really have to know what his economic situation is before you know what motivates him, and I really do not know.

Chairman HUMPHREY. Do you have any reserves in Libya?

Mr. RAWL. Yes, sir, we do.

Chairman HUMPHREY. Have you been nationalized?

Mr. RAWL. We take the position that we have not been nationalized.

Chairman HUMPHREY. What has really happened?

Mr. RAWL. We are still lifting oil in Libya but we are having, you know, serious disagreement with the Libyan Government.

Chairman HUMPHREY. Is the production down?

Mr. RAWL. As of last week it was not. I really do not know today.

You know, this is a small world but it is pretty long in terms of some of these daily kinds of communications.

Chairman HUMPHREY. What you are really saying is that there is an uncertainty as to whether or not either production will be increased or whether it will be decreased.

For example, we have been asking for increases in Saudi Arabia.

Mr. RAWL. Yes.

Now, in Saudi Arabia there are physical limitations presently associated with substantial increases. As you know, Saudia Arabia is producing a very, very significant part of the world's oil right now. Hopefully over the next few years some of these physical bottlenecks can be removed and production can be increased.

Chairman HUMPHREY. Again I think it would be very helpful for more of our people to know some of those physical limitations because they are genuine and real. Even though you can increase the production, it does not take care of it next week.

Mr. RAWL. Yes, sir.

Chairman HUMPHREY. Or next month. And what we are dealing with here in this Consumer Economics Subcommittee is the situation as it prevails today in the immediate foreseeable future.

Now, there is, of course, the long term, the 5-year, 10-year, 15-, 20-year projections which we need to look at. Those projections I do not find very encouraging.

I wonder what your general observation is.

Mr. RAWL. Well, our observation is that we have to do all in our power in this country to bring forth energy from all the sources available to us. You talked about some of them. Some of them have been suggested as panaceas.

The one that I hear a lot about, thermal energy is going to be quite limited, in our opinion.

You mentioned some of the problems with oil shale. We actually have some legislation on the books right now that almost precludes anyone going into the oil shale business. You are familiar with some of these things?

We really have to do everything we can to bring out all the energy from coal, nuclear, solar, you name it, and then we are still concerned.

Chairman HUMPHREY. I have, just to give you a little idea—we are now just completing—this is one of the charts on the supply/demand, looking up to the year 1995. At the top here is hydro, what you can get out of that. It is hardly significant in terms of what you could do to expand hydro.

The same thing in geothermal. Geothermal is limited in the States in the West. Nuclear is still the great possibility. Hopefully the breeder reactor, the first breeder reactors will come into being possibly by 1990, 1985, hopefully. They are very costly. Fusion, the year 2000 possibly.

Here is the oil shale, possibilities of what we see on oil shale. I mean I am just showing you here, on this chart let's say a sixth of an inch. It is about an 18th or 16th of an inch in the total supply.

The Alaska oil is a substantial little piece in there, but in terms of the total picture of demand, you take a look at Alaska oil, possibly a quarter of an inch out of an area of a 6- or 8-inch chart. The Alaska oil is again significant. All of these things are significant.

If you use solar energy to heat all the homes in several of the Western States, it still would leave a tremendous shortage of fuel supplies, let's say, until the year 1980, I do not have to worry about that right now. Hopefully I will be able to take the worry out of it. I would like to live that long.

But it just seems to me that this country has to take a good hard look down the road and not leave public policy only to private interests. I think there has to be a coordination between the private interest and the public policy.

Today we are just relying upon good luck, the Lord, and hopefully the oil companies. Last year all three worked pretty good. We got by.

But if anybody defaults in the next period of time, we are going to be in trouble.

Now, I happen to think that we may run out of some good luck. I just look at those old temperature charts out in the Midwest. Every time I do, I go get that snowmobile suit of mine on again.

Thank you very much.

Mr. RAWL. Thank you.

[Whereupon, at 1:30 p.m., the subcommittee recessed, to reconvene at 10 a.m., Thursday, September 20, 1973.]

POTENTIAL HEATING OIL SHORTAGES

THURSDAY, SEPTEMBER 20, 1973

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON CONSUMER ECONOMICS
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 4202, Dirksen Senate Office Building, Hon. Hubert H. Humphrey (chairman of the subcommittee) presiding.

Present: Senators Humphrey, Javits, and Percy; and Representative Widnall.

Also present: William A. Cox and Jerry J. Jasinowski, professional staff members; Leslie J. Bander, minority economist; Walter B. Laessig, minority counsel; and Michael J. Runde, administrative assistant.

Senator JAVITS [presiding]. The subcommittee will come to order. In the absence of Senator Humphrey, who will be present shortly, I shall declare the hearing open, and the Chair will now ask the witness, Jack H. Bridges, to come forward.

Mr. Bridges is the Technical Director of Energy Resources of the Joint Committee on Atomic Energy. As Technical Director, his primary responsibility involves a constant surveyance of the national energy situation so as to keep the members of the Joint Committee on Atomic Energy informed of the situation.

Recently he has been concentrating on preparing a system for display for the public to understand the national energy situation, including various projections and options that appear to exist for the United States during this time, when we seem to be on the threshold of an energy crisis.

Mr. Bridges, I have seen and heard your presentation, I commend it highly to the press and the public. Mr. Bridges will proceed in his own way, if you will give him your attention, and it is expected that the chairman, Senator Humphrey, will be here very shortly.

Mr. Bridges, please proceed.

STATEMENT OF JACK H. BRIDGES, TECHNICAL DIRECTOR, ENERGY RESOURCES, JOINT COMMITTEE ON ATOMIC ENERGY

Mr. BRIDGES. Thank you, sir.

This briefing is based on a joint committee print recently issued by the Joint Committee on Atomic Energy. It is entitled "Understanding the 'National Energy Dilemma'." The purpose of the print and of the

EDITOR'S NOTE.—The foldouts used at the time of the hearing by Mr. Bridges were in contrasting colors. The foldouts reproduced herein for the record are printed in black and white.

briefing is twofold. We have tried to describe the magnitude and the complexity of the energy situation that the United States appears to be facing, and we have tried to propose, in effect, a mechanism for measuring options so that as the country looks at the various options we are at least talking the same language.

We have not tried to make projections of our own in detail, nor are we making specific proposals of what we think ought to be done.

We have developed a two-part system—energy display device. The first part is a three-dimensional plastic system, which I would like to describe briefly. The second part is a series of slides, or graphs, or charts. I will refer to the appropriate part of the committee print as I proceed.

If I could get the lights turned out, or down, I will start.[1]

The main thing to remember is the total system is all to the same physical scale. You can forget the numbers. You can see right off, for example, this is the year 1960. We are talking about history, but in 1960 we were already getting more energy from oil and more energy from gas than we were from coal.

This portion represents our domestic oil input in 1960. The smaller part here, about one-fourth of that amount, was our imported oil in 1960. We took a small amount of oil for boilers to generate electricity. We exported some sophisticated petroleum products in 1960. We took this [pointing to slide] quantity of oil into the residential and commercial section. That use is about 75 percent housing and 25 percent offices, shopping centers, et cetera.

This physical quantity of oil went into industry iron, steel, automotive manufacture, agriculture, et cetera. Smaller quantities of oil went into the nonenergy uses for petrochemicals, plastics, and fertilizer manufacture. The largest single use was for the transportation sector.

Coal was all produced domestically. Large quantities of coal went under boilers to help generate electric power. We exported a small amount of metallurgical coal to Japan and Europe. We still used some coal to heat homes and office buildings, and some apartments. In 1960 we still had some coal being used in coal fire railroads, primarily in the Western part of the United States.

Our largest use of coal, of course, was for the industrial sector, primarily in the iron and steel business.

Natural gas—a great majority from domestic production and very small amount imported. Some gas went under boilers. Some was used in field use. That's were we reinjected it into the ground to try and improve our recovery of oil.

This gas went into homes. We used a little more than that in industry. A small amount of gas went into transportation. We consider oil and gas pipelines as part of the transportation network.

Then back to the "supply" side. the yellow line was the total hydroelectric system to scale in 1960. You can see we couldn't draw a line for significant nuclear or for geothermal system.

Now, go from the supply side into energy conversion. The only conversion system we had going in 1960 was the generation of electric power. We used this quantity of oil, coal, and natural gas converting into electricity—we lost over two-thirds in the conversion losses out of

[1] See foldout B, p. 73.

smokestacks, waste heat into water, et cetera. We effectively generated the quantity shown here—this dark blue—of electricity.

Again, remember, everything is to scale. You can see, in 1960 actual electricity was less than 10 percent of our total energy forms that we actually moved to the consumer.

Now, again, this is all to scale. In the consumer—where it was actually used—industry used far and away the largest amount of the energy.

Second to that was transportation, closely followed by residential and commercial, and then the non-energy uses.

Now looking at all those, the transportation sector with its large quantity of oil, small coal, small gas, trying to get mobility out of it, we lost over 75 percent—the red part here in the corner—out of our exhaust pipes, et cetera. We used less than 25 percent. In the industry and the residential and commercial areas, primarily because of the fact all the processes are stationary, we lost about 25 or 30 percent, successfully used about 70 percent.

Looking at the whole system, then, our conversion losses from electric generation, our conversion losses where we attempted to get mobility, heating, and cooling, et cetera, amounted for the red. The green shown was the useful part. In 1960 we rejected about 51 percent of the system and successfully used about 49 percent. That was one of our better years, as you will see later on.

Now [using plastic device], put the whole system on a series of plastic sheets, and I will just have to run through this, and maybe a couple of you can glance at it later. The whole thing is the same physical scale.

This is what you saw, the year 1969.[1] Here is the year 1950.[2] The reason we do that is that that was really the start of the massive increases in the U.S. energy consumption pattern. Bear in mind now the whole system is to physical scale, and it took us our total history to work up to what you see here, from 1950 to 1960. You can also see a relatively small total energy increase between the years 1950 and 1960.

This is the year 1970.[3] We are still talking about history. You can see between 1960 and 1970, for example, how electric generating capacity more than doubled in that 10 years. We put more electric generating capacity on the line during that decade than we had in our whole history up until the year 1960.

Our use of natural gas almost doubled in that 10-year period. Coal went up about 30 percent and oil about 40 percent.

Chairman HUMPHREY [presiding]. Now, go ahead, Mr. Bridges. I just wanted to let you know I am here.

Mr. BRIDGES. Now, this is the year 1980.[4] This is the first time we are starting to show projections. The great majority of available projections for 1980 are very close to each other. You get some variations in how much electricity may be generated by coal versus how much by nuclear, et cetera, but the totals are very similar. The thing to remember is that the United States, if we can get the supplies, has already fundamentally committed ourselves to the energy pattern we show

[1] See foldout B, p. 73.
[2] See foldout A, p. 72.
[3] See foldout C, p. 74.
[4] See foldout D, p. 75.

here for 1980. We have already ordered every major electric generating system that can be functioning by the year 1980. We have already started on every major rail base mass transit system that will be operated by 1980. We are apparently going to put over 12 million new cars on the road this year, and over 90 percent should be operating by 1980, even though they may be on the second or third owner.

By the end of this year, we will have well over 100 million cars on the road, probably averaging less than 13.5 miles to the gallon. In this year, the largest single number of one car model sold probably will be the Chevrolet Malibu with a big engine in it—it will get around 10.5 mpg. The 1973 Vega, comparably equipped with air conditioning and automatic transmission apparently gets about the same gas mileage as the 1966 Cadillac got.

By 1980 our basic conversion efficiency will drop to where we are rejecting about the mid-fifties and should be successfully using about the mid-forties, around 45 or 46 percent.

Chairman HUMPHREY. Mr. Bridges, could you turn that display around so that our friends here of the media can get a better look at it, too. I want them to see those. I have seen this device about three times, and I just wanted some of you to share it in the light of what I said on Tuesday.

Mr. BRIDGES. You want me to work back here?

Chairman HUMPHREY. If you can, it is fine.

Mr. BRIDGES. Yes, sir.

Remember 1950, 1960, and 1970 are history. We are almost committed to 1980. And again bear in mind that it took us our total recorded history to work up to the level of 1950.

All right, this is the year 1990.[1] We started to quit there because we started to run out of plastic. By this year's projection you are beginning to get variations in the total, it may be as much as 5 or 7 percent.

This is one of the more conservative ones, by 1990 our efficiency will be in the high fifties, about 57 percent rejected.

From the year 1970 until about 1980 or 1983, 1970 to 1985 to be conservative, in that period, the United States will use more oil and gas than we have used in our total recorded history up until the year 1970.

Now, if you consider the rest of the world. Japan and Europe are now growing at a faster percentage in their energy consumption than we are. From the year 1970 until the high nineties, mankind as a whole looks like it is going to go up over 400 percent in its energy use if supplies are available. It looks like mankind, in that 30 year period, is going to use as much energy in all forms—oil, gas, cow dung, and everything else you can thing of—than we did in our recorded history of mankind up until the year 1970.

Chairman HUMPHREY. Please repeat that again, Mr. Bridges. You know this so good and so well that I just want it to sink in, because it took me about three shots to get it—about three rounds, and I want you to repeat that, because that is the slugger.

Mr. BRIDGES. The world's energy growth pattern is on a course now to where from the year 1970 to just shy of the year 2000, demand is expected to go up, if the supply is available, over 400 percent. Through that 30-year period it appears that mankind will use as much energy

[1] See foldout E, p. 76.

from all forms that we can calculate—wood, cow dung, nuclear, anything else—than we have in our recorded history up until the year 1970.

These are the patterns that we appear to be going on if we can get the supplies.

Now, cut these flow patterns at 90° and then you can start studying any particular part of the energy pattern you want. This would be an efficiency curve,[1] you just physically measure 1975, for example, and you can convert it to pieces of pie or bar graphs or anything of that nature.[2]

All right, that woud give you then, an idea of where you would physically go into the energy flow pattern to calculate and watch efficiency curves.

The next area we should focus on is where the consumer actually uses this energy.[3] Remember that over half of the data is history. It shows where we use it in transportation, in the nonenergy uses, in the industry uses, or in the residential and commercial uses.

The next area that we try to focus on is the form that the energy is going to be used in—again by the consumer.[4] Are we going to use it as a liquid, blue; as a solid, brown; as a gas, orange; or electricity, lavender.

Again, what we are doing this for is to show you the associated systems that have to be brought to bear if we are going to follow these patterns. Of course, liquid will take pipelines, tankers, et cetera, the solids mostly rail, the gas pipelines, and the electricity—which in a little over the 35 years shown here builds up well over 500 percent—will have to be hooked up with copper or aluminum wires.

The last intersection is "supply/demand."[5] We show it in quotes, because you can argue all day whether you should call it "supply/demand" or "requirement" or some other names. This gives you an idea of where we are getting our oil, solid blue is domestic, cross hatch import, the same with gas, and then the nuclear system as it appeared to be showing up—the geothermal that is showing up in California, and then the hydroelectric.

So, anyway, that completes the energy display system. It was designed for use by just one or two people at a time, and as you can see we have had to try to improvise it to larger groups. We have reduced some of this information to slides. I will complete the slides.

This is a photograph of the last cross piece.[6] It is not identical to this particular unit, because we are still modifying the display device. This—blue—is domestic oil over the years 1970, 1975, 1980, 1985. The imported oil pattern that appears to be shaping up is in cross hatches. The synthetic crude system that was oil shale, if we bring that on, coal, natural gas—domestic and imported—geothermal, hydro and nuclear projections that were being made a while back.

Now, if you will take and remove the spaces between each item you start getting to the chart that we are trying to get people to use as a

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[1] See foldout G, p. 78.
[2] See cross-plot construction as shown on foldout F, p. 77.
[3] See foldout H, p. 79.
[4] See foldout I, p. 80.
[5] See foldout J, p. 81.
[6] See foldout J, p. 81.

common denominator.[1] This is exactly the same information, just that we don't have spaces in between.

Here, now, we are using the yardstick of millions barrels per day oil equivalent. The United States—in 1960 we were up to about 22 million barrels per day of oil equivalent—it took us our whole history to get there. In a little over 10 years we are up to 1973, we are up to 36 million (B/DOE)[2] in the United States.

Now, we are getting that in pieces. We are using about 10 million B/DOE—give or take—of domestic oil, 6.5 going toward 7 in the form of imported oil and products. We are using coal at the equivalent of about 7 million B/DOE. Natural gas at about 12 or 13. The hydroelectric system is about 1 or 2 something in that range. Nuclear right now is a little bit over 300,000 or 330,000 million B/DOE.

In other words, our nuclear input to our system is still less than 1 percent of the total, it is about 0.8 or 0.9 of 1 percent of the total.

Now, take the imports, both oil and gas, put them up on top so we can start focusing on the real impact there.[3] This is the kind of curve you get. Again, the same basic information, and to try to correlate this to those of you who might have one of the committee prints, this particular curve is the one that is shown on foldout "L."

You can see how the Alaska pipeline—we have had to show its impact all the way up into the import or shortages zone. This area is the "I told you so" part of the chart. This is the surplus oil capacity that we had in Texas, Oklahoma, and Louisiana. You can see over the years our fossil system—oil, coal, and gas—has actually been a relatively predictable thing.

This problem just did not arrive one afternoon in 1971 or 1972. We have not really been able to get everyone's attention until the country has now had a few mild heart attacks, and now we have to face where we are heading.

The import picture last year, out of 70 some odd billion dollars in our total foreign exchange, about 7.5 went out for the purchase of oil, 3.5 or more came back from the multinationals. That is a very, very hard number to come by. By 1973, the end of this year, it looks like we will be well past $9 billion. We have some projections now as early as 1976 that import costs will exceed $17.5 billion. By 1985 you can find projections of anywhere from $30 billion on the low side to $70 billion on the high side. Most people consider that thing completely unacceptable.

We point out to our bosses, if that is an unacceptable situation, that we are going to have to have some sort of an energy strategy to give we technocrats enough guidance before we can really give you suggestions on the trade-outs we need in the domestic system.

Are we really going to play with the energy demand curve? We are one of the few major countries in the world that still has a policy of attempting to supply to the consumer energy as cheaply as possible, irrespective of its actual replacement, its environment cost, foreign exchange or domestic and international problem that might create.

Anyway, that is the demand curve we are on. You have heard many times the old comment of 6 percent of the world's people using 30 some odd percent—around 35 percent of its energy. That is where we are.

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[1] See foldout K, p. 82.
[2] Barrels per day oil equivalent.
[3] See foldout L, p. 83.

That basically was accepted by the rest of the world as long as we were doing it from our own resources. Now we are going into the foreign market in a big way.

Now, if you consider the import picture developing into an unsatisfactory situation, then this means that somewhere you have to start paying the prices—dollars, inconvenience, trade-outs, et cetera, to strengthen the total domestic pattern.

If we keep going in this way and successfully get the supplies to do it the way we are now heading, you see we have 10, 20, 30—about 35 million B/DOE that we will need from our domestic systems in a little over 10 years.

On the other hand, if you try to hold the imports to only double what we have got today, $20 plus billion per year, then we would have to have—10, 20, 30, 40, almost 50 million barrels per day oil equivalent from combinations of domestic sources. You would have to go find another 10 Alaska pipelines and 10 Prudhoe Bays, or you would have to go find four more States of Texas and produce them, something of that magnitude is the difference simply in that one variable selected.

Chairman HUMPHREY. I wish you wouldn't run over that so fast, Mr. Bridges. That is a thing I don't believe people understand is that even when you cut back on what you see as your demand curve and get it trimmed down to where you are saying the 50 million barrels per day, that as you said you would have to find four more—what did you say?

Mr. BRIDGES. State of Texas, our largest oil poducer is now the State of Texas, about 3.5 million B/DOE and on a slight decline. If you had to go find another 15 million total oil equivalents domestically you would have the task of that magnitude to fill the gap, or since Prudhoe Bay probably is going to support a million and a half B/DOE fairly fast through the Valdez line, you would have to have 10 more Valdez systems, 10 more Prudhoe Bays.

Chairman HUMPHREY. I just thought it was good to drive the point home, because it took us how many years to get some understanding about the Alaska pipeline? If we have to fight for the next 10 as long as we have on this one we would all be dead.

Mr. BRIDGES. Well, it would be interesting to watch, yes, sir.

Anyway, I could emphasize and get to the other options here very fast. That was the one I was already speeding to get to. Again I want to emphasize that until we get some idea of what we are going to try to do with the demand curve, and we are not recommending that you attack it, we are just trying to point out its impact on the overall picture, and some idea on where we really want to bowl our bag on the import picture.

Those two are the guidance [1] that we have to have to determine the seriousness that we use to go after our total domestic systems.

Now, to look at the demand curve.[2] These are a whole series of projections, we are not in that business. Remember, here we are, 1973, we have worked up to 36 million B/D oil equivalent. If we keep on our present demand patterns, we go off of the chart in a little over 20 years to something like 120 million B/D oil equivalents—that will be close to what the whole world is using today.

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[1] See foldout M, p. 84.
[2] See foldout N, p. 85.

On the other hand you have other projections.

Chairman HUMPHREY. What is that? By the year 2000?

Mr. BRIDGES. Yes, sir, and you have to start looking further down the road than 1985. As much as we hate to even talk about projections that far down the road, you have to do it for at least three reasons.

The first one is, far and away the great majority of the Federal research and development money being spent on energy programs today is in projects that won't even impact until in the nineties, so you have to have some idea of what we are doing out there.

The second thing is that we think the country has to understand that we are at a very fundamental turning point in our energy history. It is better if you look at the whole forest right now, before you try to fight over the individual trees.

And the third one, our very commitment to solving our long-range effort may be one of our best bargaining tools to get through the short-range problems. In other words, if anyone thinks we are going to die anyway we stop being an effective customer much faster than if they figure well, they are going to have to deal with us for another century. This is one reason why we are trying to get the country to look further down than just 1985.

Now, these are different demand projections, you can see. Some are from the Department of the Interior, others from the Office of Science Technology, several from National Petroleum Council, et cetera. We are not trying to say who is right and who is wrong; we just put them all up, again using the same device to display them.

Now most of them are variables of the kind of things they think would lower our energy demand curve. Some have guessed that the price mechanism alone will do this, others show what they think would happen if we forced ourselves into smaller cars, et cetera.

To emphasize the magnitude of the energy problem we have gone through the following elementary mathematical exercises.

We started with the demand of 120 that most of us would like to see available if it could be. We could keep using all of the energy-consuming things that our hearts desire. We subtracted from 120 the savings anticipated by some of legislating 40-horsepower cars right now, so you would have half of all cars on the road by 1985, 40-horsepower cars. Legislating aircraft load factors from 55 to 85 percent. Insulating all the new homes and buildings so we pick up a 20-percent heating and cooling saving there, forcing a 10- or 15-percent improvement in energy conservation in the industry use, trying to pick up a 10 percent or so improvement in electric conversion—we don't know how to do it. I added all those savings together, and then threw in a 50 percent "Jesus factor," and that got us down to about 87 million barrels of oil equivalents. So we have made several displays at 87, we have made some at 82.

I would like to emphasize that we are not recommending the country try to pull itself down that low in energy, because you have real social problems, jobs, et cetera. On the other hand, we are not saying that some combination of factors couldn't actually bring us below that. We are showing you an 82, which is very low in most people's books, to emphasize the magnitude and the complexity of the problem we have staring us in the face.

Chairman HUMPHREY. Now, what year is that?

Mr. BRIDGES. That is 2000. That would be about a 25 percent below the way we are heading now.

Chairman HUMPHREY. That includes all these conservation measures you are talking about, and it includes—what did you call that?

Mr. BRIDGES. Well, in the engineering game we used to call it a "Jesus factor."

Chairman HUMPHREY. You include that too, and when you get down to it you would have to have better than twice the amount of barrels per day equivalent?

Mr. BRIDGES. Than we have today.

Chairman HUMPHREY. Than we have today. And where are we going to get it?

Mr. BRIDGES. That is one of the problems.

Well, anyway, we've also shown an import picture which is higher than what most people want to see.[1] This is one of the better balanced ones. This is the curve that has become known here on the Hill "as the one designed to make everyone equally mad." A good while ago, we gave up trying to make everyone happy, because we can't really do that with Santa Claus dead. So the best we can do is maybe step on everyone's toes the same amount.

So you start off with the demand curve down to 82, and you have about 75 percent of the people unhappy there, because they can't get their Cadillacs anymore and have trouble with their power boats. You have 25 percent unhappy because you didn't lower it more.

Here is the import curve, double what it is today. And then we have the problem of trying to fill, as you will remember, the remainder with a combination of domestic options. And these, again, are not our projections. We have gone to about 60 or 70 different sources. Anybody can find them.

You will see when you actually look at each one of them, and actually convert the end results to barrel per day oil equivalent, that we are showing, usually, the more optimistic of each of these particular areas.

The lower 48 oil—this is about 2 million barrels per day above some projections of the Department of the Interior as late as December 1972. In doing that you go offshore of the East coast of the United States, and you have a good finding rate there; you go three to five times what we're doing in the Gulf of Mexico; go offshore in places like California, including the Santa Barbara Channel. At that stage, as you can gather, we have stepped on the toes of at least some southern Californians with much gusto.

With coal, we have estimates there of 0.6 of what we are doing today, if we eliminate all strip mining and have problems going underground. Others are up to about 3.2 what we are doing today—this particular one is a 2.7. That would still require tripling the above-ground mining we are doing today, or strip mining, plus a 50 percent increase underground. You would have real water problems in Montana and Wyoming, particularly if you go after the coal gassification that we will probably need.

Now, domestic gas. It is probably one of the hardest ones to guess. You have projections there from oblivion tomorrow no matter what you do up to unlimited quantities if you deregulate new gas now.

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[1] See foldout O, p. 86.

This particular display here is a little optimistic compared to FPC's during the 1980's, a little pessimistic out toward 2000.

This has been the game I've been in for a good while when I was in the Navy, primarily, and I think the whole thing is probably optimistic, after I watched Texas last winter and Texas this summer. They are still in a cutback situation on some of their natural gas uses. And that's midsummer of this year.

This is the geothermal line, that is, assuming we can solve some of the technical problems staring us in the face and literally convert California, Montana, and Idaho to geothermal. We would pay somewhere between $35–$40–$45 billion for it. It's equivalent to 100 or 110 Hoover Dams.

Chairman HUMPHREY. Just stop there again.

Many of them in my age group were brought up to believe that the Hoover Dam was just about as big as anything anybody could ever make. And I understand what you are saying here is that if we maximize the development and exploration of geothermal, on the most optimistic estimates, you would have to spend a sum of money that would be equivalent to 100 Hoover Dams?

Mr. BRIDGES. The electric power you would get from that system would be about equal to 100 or 110 Hoover Dams. And I don't want to pick on words, but we are not saying that these are maximum efforts in any particular area. These are some of the largest projections we have seen from advocates of each one—not necessarily what a "maximum" would be.

Chairman HUMPHREY. Yes.

Mr. BRIDGES. Most people think that this is much too high for geothermal.

Chairman HUMPHREY. Well, a lot of people are led to believe that if we just go at that geothermal we will end our fuel problem.

Mr. BRIDGES. It will help, but it sure won't end it. Now I mean, that would be a massive effort in geothermal to get that, for example, to your Hoover Dam thing. The United States with 36 million-plus oil equivalent today. Hoover Dam generates power at the equivalent of about 22,000 bbl/d. Our largest hydroelectric system is about 35,000 bbl/d. oil equivalent.

Chairman HUMPHREY. That gives you some idea of what we are talking about.

Mr. BRIDGES. Well, we are just trying to get people using the same yardstick, so that we can at least stop some of this concept, so that all you have to do is do something like this and it solves it.

We are convinced that we have to move into all of these areas, and we are convinced that we are going to be looking for everything we can find within reason, and we are going to try to conserve everything we can to convince the public to conserve, including turning off a lightbulb. You don't see it on the chart, but it helps.

OK, the next one is the hydroelectric system, and this is about double what we have today. Again, we are not advocating, but we want to emphasize that about 85 percent of the damsites in this country are, of the ones that are recognized as good potential sites, are in parks, wilderness areas, and scenic areas. Three of the better known are in Grand Canyon. I do not recommend damming Grand Canyon. I am just emphasizing that the majority of the hydroelectric capacity sites left in this country are in parks, wilderness areas, and scenic areas.

Chairman HUMPHREY. And aren't you saying that if you got that much new energy from hydroelectric you would have to use all of those facilities?

Mr. BRIDGES. Well, you would have to go at some of them. You all, politically, would have the problem of which one. But even if we double our hydroelectric system today, this would be what that system will look like.

Again, we are not saying you shouldn't. I would like to see you biuld some more dams, but don't think, again, that will solve our problems all by themselves.

Alaska oil, below the dotted line, is Valdez and 1.5 million barrels per day, if we can get it going by 1977. Here is the McKinzie through Canada, if we can get it going by 1980, and if we can get the Canadians to sell some oil. If we can forget the Teapot Dome scandal long enough to go after Petroleum Reserve No. 4 and find another Prudhoe Bay or so, then that oil system will be about 4 million barrels per day equivalent.

Oil shale--you hear things about bonanzas and things. I think that in 10 years or less, we will be using oil shale. But again I don't think it will solve the problem by itself.

This one is about a 2.5 million barrels per day shown here. One of the kickers is that about 6 or 7 percent is useful by weight. For 2-2.5 million barrels per day you come very close to digging the equivalent of a Panama Canal every afternoon in western Colorado. You also come very close to committing the minimum waterflows of the White and the Colorado Rivers. Again, this doesn't mean that we don't use shale, but just don't say that it will solve our problem by itself.

Chairman HUMPHREY. Well, you were just posing a tremendous engineering problem and disposal problem.

Mr. BRIDGES. Yes, sir, and we're trying to keep them in perspective.

Chairman HUMPHREY. To get 2½ million barrels per day oil shale——

Mr. BRIDGES. I'm not saying you can't do this. The Panama Canal wasn't that big. We could do it, but it would be a massive effort.

Chairman HUMPHREY. But you said you would literally have to be able to move the amount of earth every day, the amount that was taken out of the Panama Canal, every day.

Mr. BRIDGES. Yes, sir.

Chairman HUMPHREY. I just thought we ought to kind of listen to that.

Mr. BRIDGES. I mean, they're all big chores, and we're all trying to get people to use the same basic yardstick and face the magnitudes of what these pieces really are.

Now, solar systems. Again we are pushing for a lot more work in solar, but one of the biggest problems there so far is that you cannot, even if you want to, you cannot buy a reasonably priced solar hot water heater, and you sure can't look it up in the yellow pages and get somebody to fix it. So, as long as it stays in the laboratories, et cetera, and doesn't get converted out to a useful system, of course, we can get no impact.

But let's assume we can successfully get a reasonable cost solar heater and cooler, and assume that we start converting the houses at a higher capital cost into these systems where they would be the most use. This particular impact here is the total heating and cooling load

of all the houses that should exist in New Mexico, Arizona, Nevada, Wyoming, Montana—I usually forget one—the western half of Colorado, and the southeast corner of California, east of the mountains, by the year 2000. That's the total heating and cooling load.

And then the nuclear system, and this is where I get in fights with some of my colleagues when we put it in the same terms. Nuclear today is up to over 300,000 barrels a day oil equivalent. It is beginning to grow fairly rapidly, but an equivalent plant in the United States today—and we are in the process of constructing 50 or 60 of these equivalent plants—but each one of them costs you somewhere between $500, $700, or even $800 million, depending upon all the parts that are included in cost. And it takes us 8½ to 9 years to build one from the time we start planning. The Japanese are building them in a little over five, the identical plant. But we now have 15 of these equivalent plants operating 30 some odd reactors. In order to follow this particular line which is close to the AEC's latest projection, you'd have to bring on one of these equivalent plants every 3 weeks from now until the year 1985, and one a week from the year 1985 until the year 2000. So we have a very massive effort needed there if you do this.

So at this stage, after we have gone over all these pieces, we hope that we can at least get the public aware that the problem is probably not as bad as they think they are being told by some people. It is, more probably, worse. We think it is extremely complex, and the lead-times involved are really going to test us as we have never been tested in our decisionmaking mechanism.

Now, a look at the forest.[1] This is sort of what we've looked like over the last umpteen decades, and just the general thrust at where we may be going. Again, we are showing a whole collection of projections. This, of course, is history through 1973. In 1900 we were using around 5 million bbl/d oil equivalent, for a total energy package, and the majority of that was firewood and coal. Along comes World War I and the only time in our history that that total ever went down was in the depression years. Finally, about 1938, 1939, at the early phases of World War II, it turned around, and we are now on, this is the part, the plastic display thing, on this "exponential curve" area over here.

And then you can look at demand curves from now on. Most projections go something along the maximum line. The minimum line we've put here is one that I'm sort of looking toward myself, and that assumes a zero population growth out here, about 2030. It assumes also an energy situation per capita about that time. And this one actually is relatively low, as you'll see, because we have passed the year 2000 not even at the 82 we showed earlier but in the low 70's. We're not saying we can do that either, but I want to emphasize that it doesn't really make matters that much different in the immediate problem we start with. Because, what has happened to us is we have charged across our domestic energy and our fossil energy system, the old surplus system we used to have and the combinations we now have. And we are now frantically trying to fill the void with the imported fossil, which is the imports that's bringing this to a head.

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[1] See foldout P, p. 87.

We are not really ready to go, for combinations of reasons, off into the yellow of the domestic nonfossil, solar, geothermal, wind, nuclear, et cetera.

We are really only working in four major areas.

The first one is our demand, through our conservation and our cutbacks.

The second one is, how rapidly can we really get into the yellow areas of solar, nuclear, et cetera.

The third is how do we keep a balanced import program, so no one can chop us up in little pieces.

And then the last one, of course, is how much are we willing to pay now to buy time and some freedom of political action, by paying higher costs, trade-outs, inconvenience, et cetera, to accelerate our utilization of the remaining domestic fossil energy.

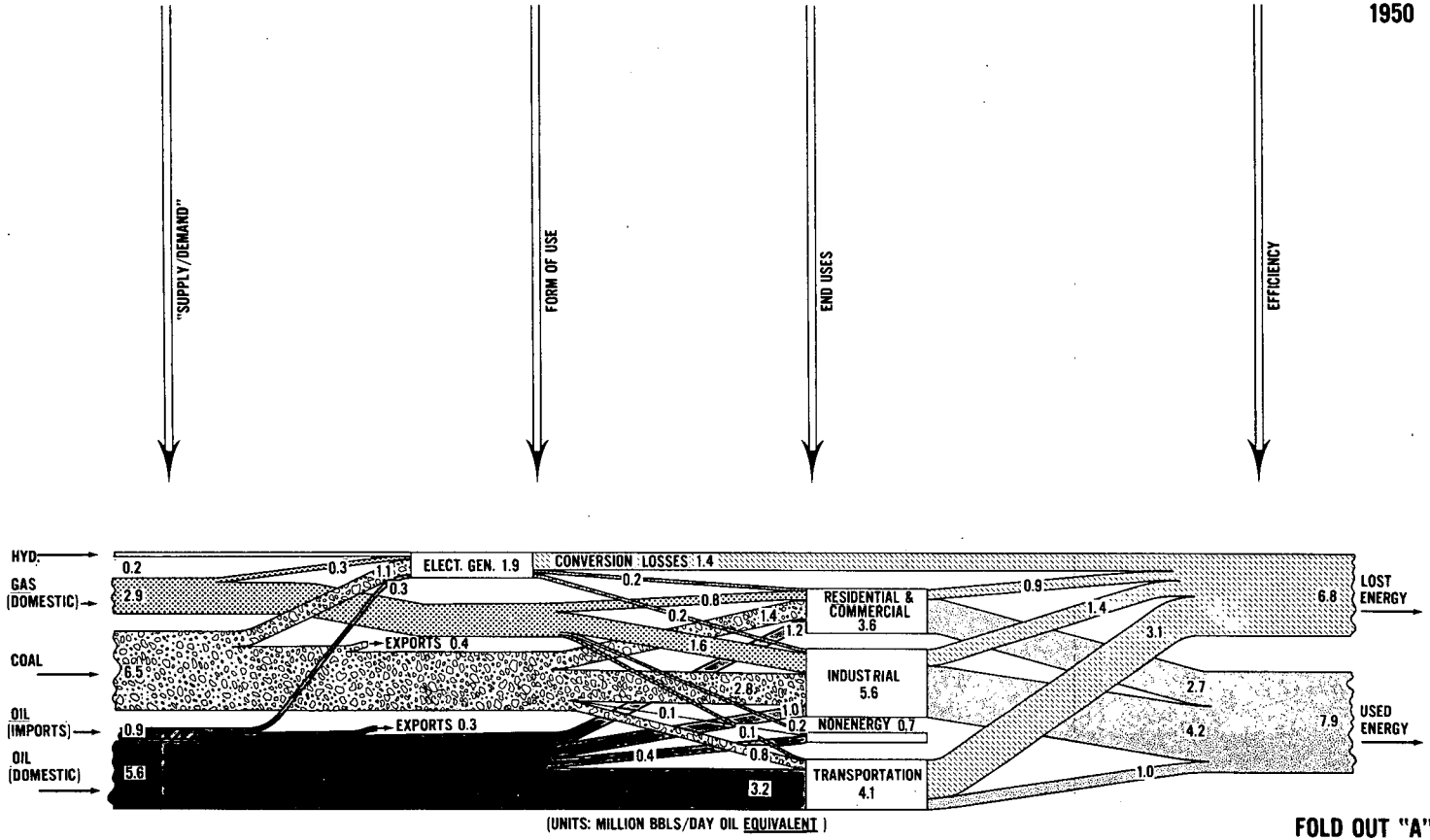
So that basically is a summary of the magnitude and the complexity of the problem, and I think we may be giving you some ideas. We hope we can, to where people will try to talk in the same terms.

Thank you.

Chairman HUMPHREY. Thank you, Mr. Bridges.

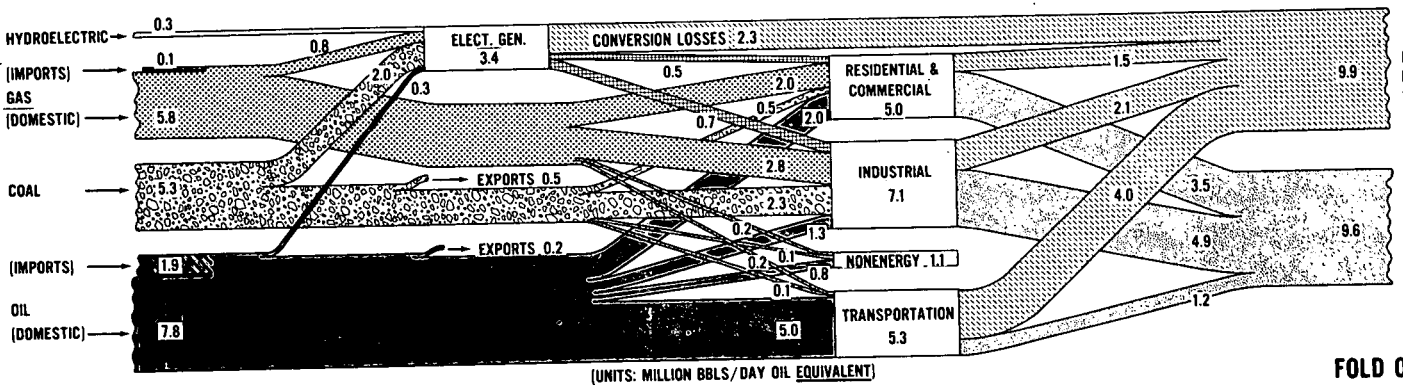
[The foldouts referred to in Mr. Bridges' statement follow:]

1950



(UNITS: MILLION BBLS/DAY OIL EQUIVALENT)

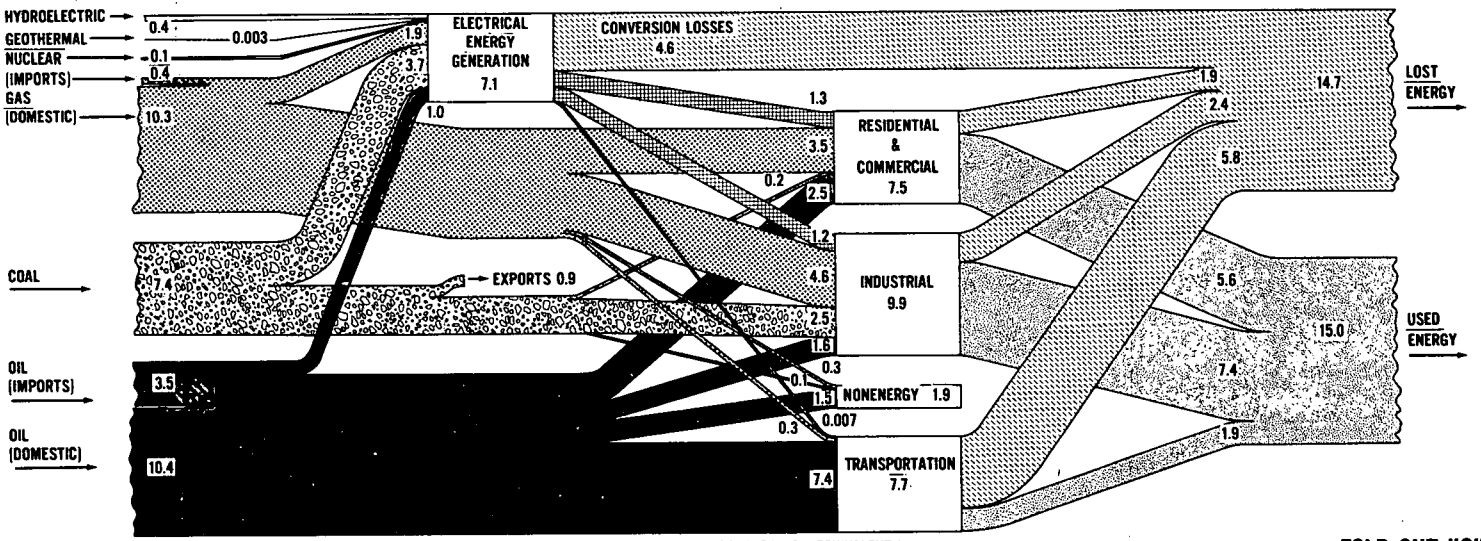
FOLD OUT "A"



(UNITS: MILLION BBLS/DAY OIL EQUIVALENT)

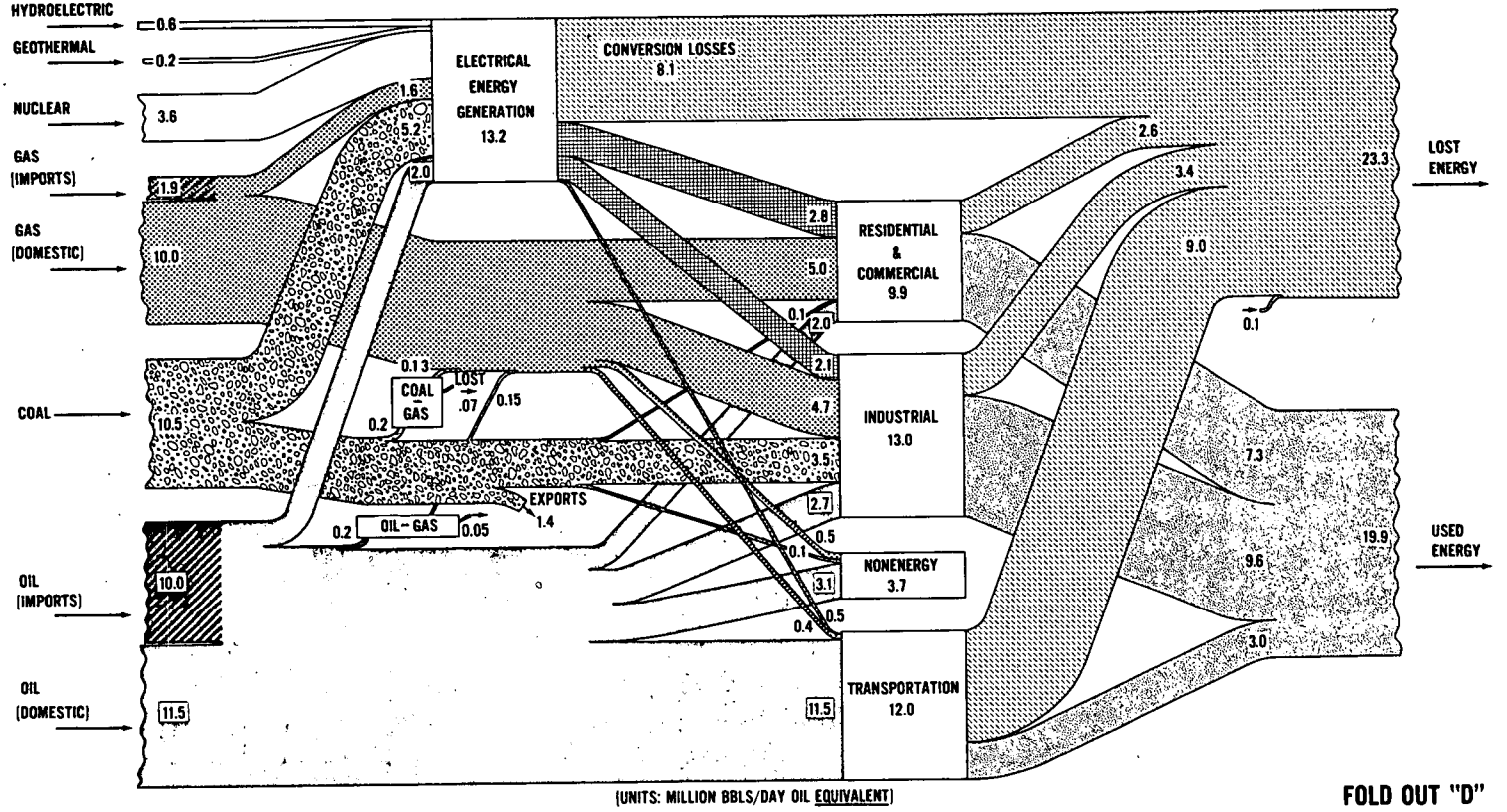
FOLD OUT "B"

1970



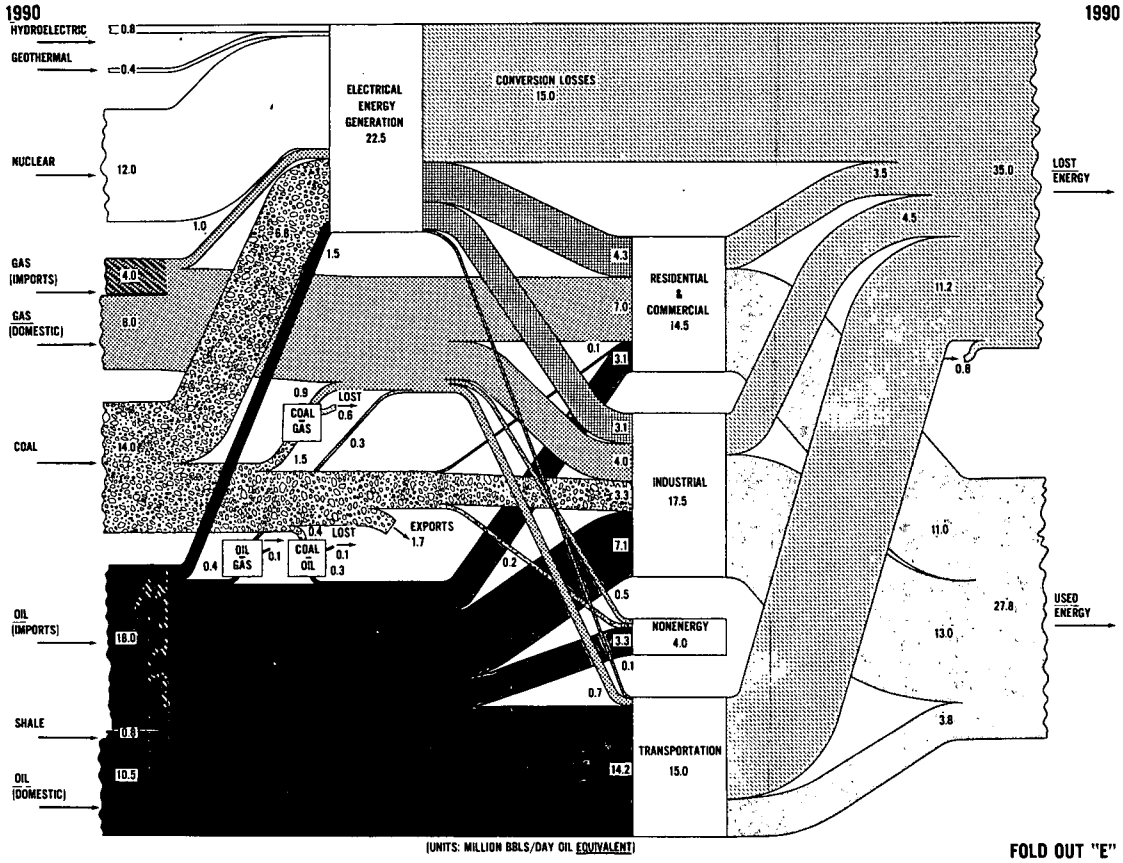
(UNITS: MILLION BBLS/DAY OIL EQUIVALENT)

FOLD OUT "C"



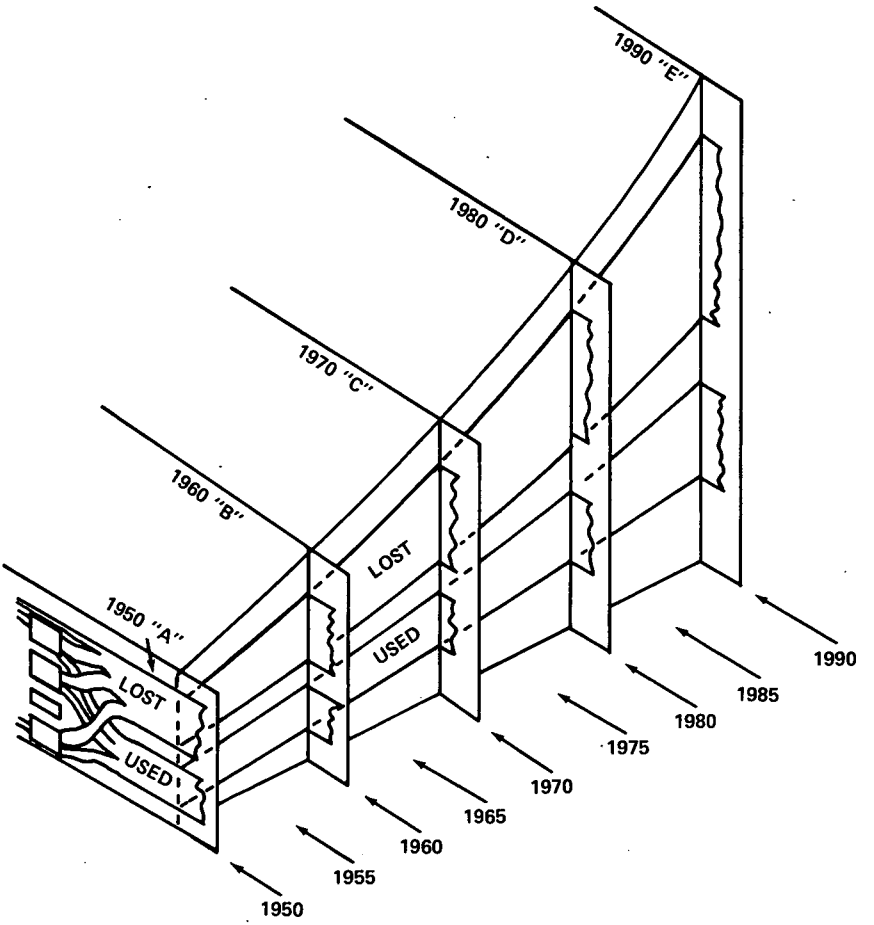
(UNITS: MILLION BBLS/DAY OIL EQUIVALENT)

FOLD OUT "D"


1990
1990
HYDROELECTRIC
0.8
GEOTHERMAL
0.4
NUCLEAR
12.0
GAS (IMPORTS)
4.0
GAS (DOMESTIC)
8.0
COAL
14.0
OIL (IMPORTS)
18.0
SHALE
0.3
OIL (DOMESTIC)
10.5
ELECTRICAL ENERGY GENERATION 22.5
CONVERSION LOSSES 15.0
1.0
6.8
1.5
0.9
LOST
COAL GAS
0.6
0.3
1.5
0.4
LOST
OIL GAS
0.1
COAL OIL
0.1
0.3
EXPORTS
1.7
0.4
0.2
4.3
7.0
0.1
3.1
3.1
4.0
3.3
7.1
0.5
3.3
0.1
0.7
14.2
RESIDENTIAL & COMMERCIAL 14.5
INDUSTRIAL 17.5
NONENERGY 4.0
TRANSPORTATION 15.0
3.5
4.5
11.2
0.8
11.0
27.8
13.0
3.8
35.0
LOST ENERGY
USED ENERGY
(UNITS: MILLION BBLS/DAY OIL EQUIVALENT)

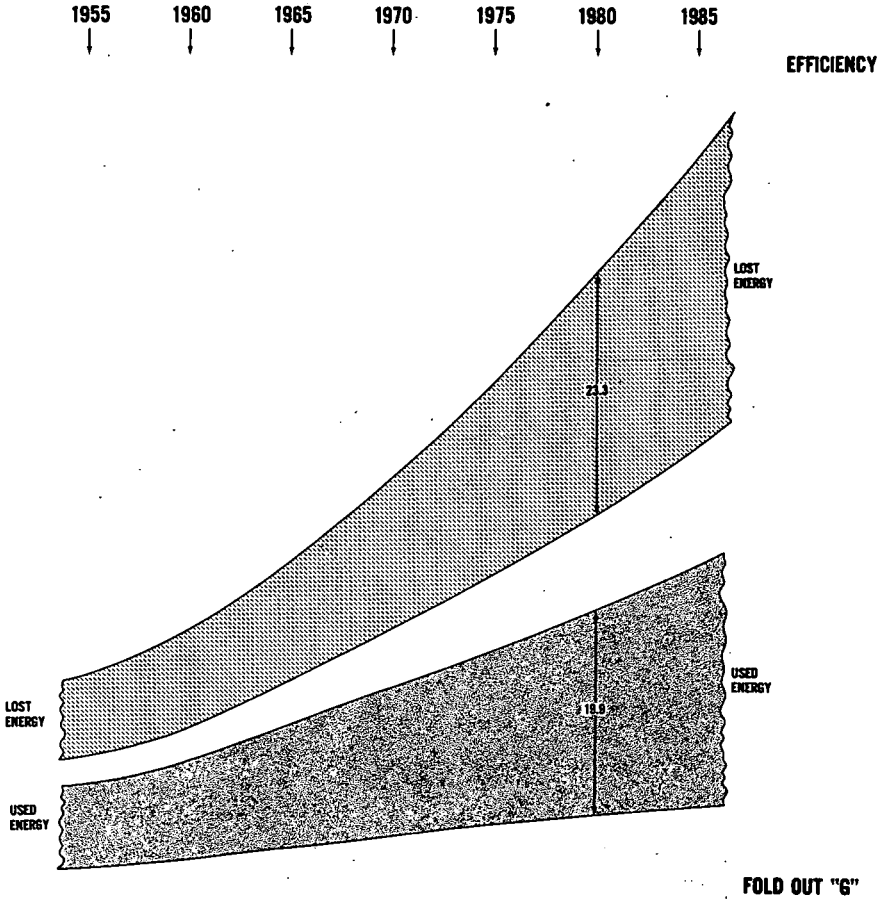
FOLD OUT "E"

CONSTRUCTION OF "CROSS PLOTS"
("EFFICIENCY" PLOT SHOWN)

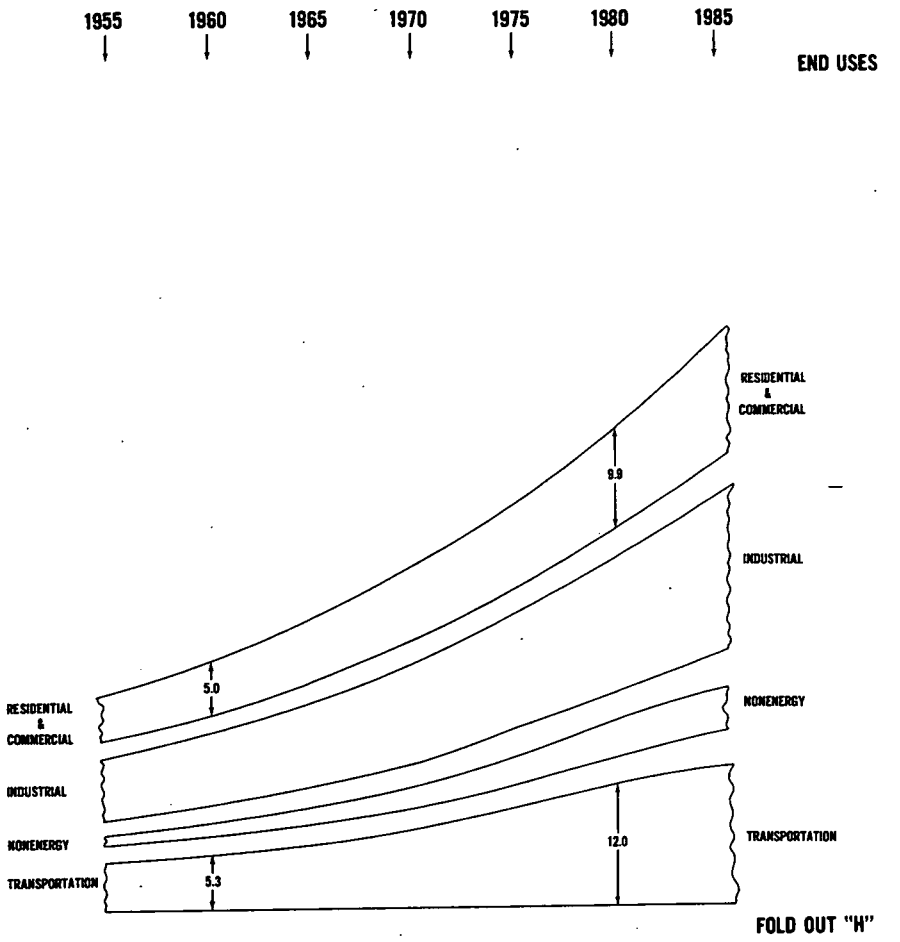


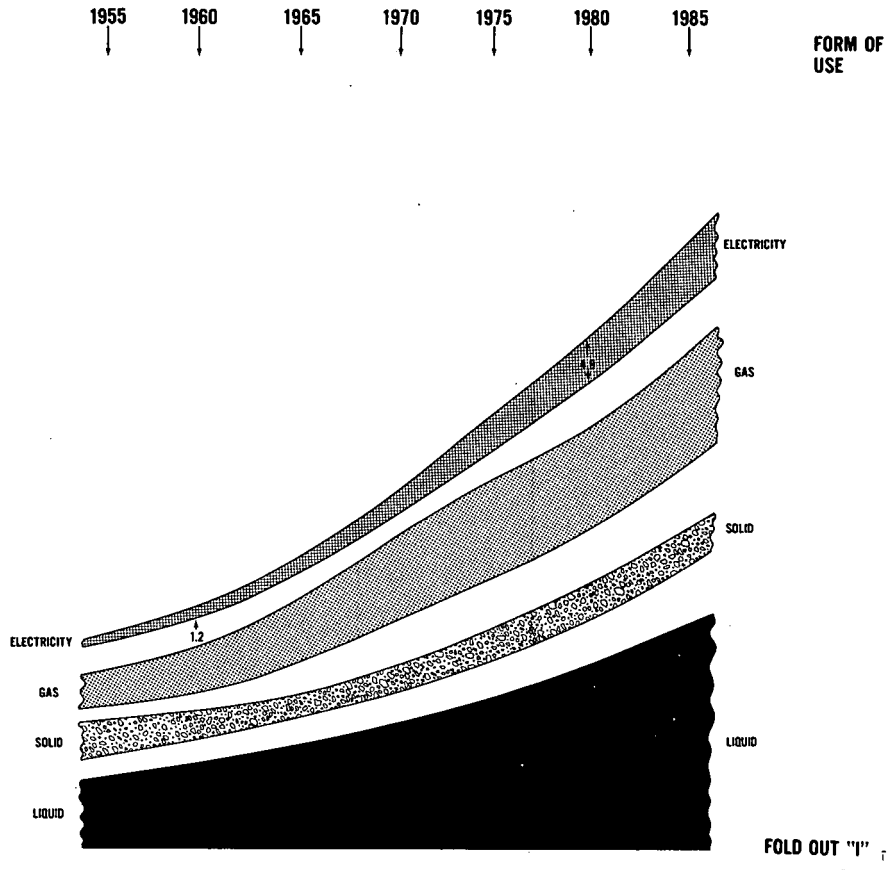
FOLD OUT "F"

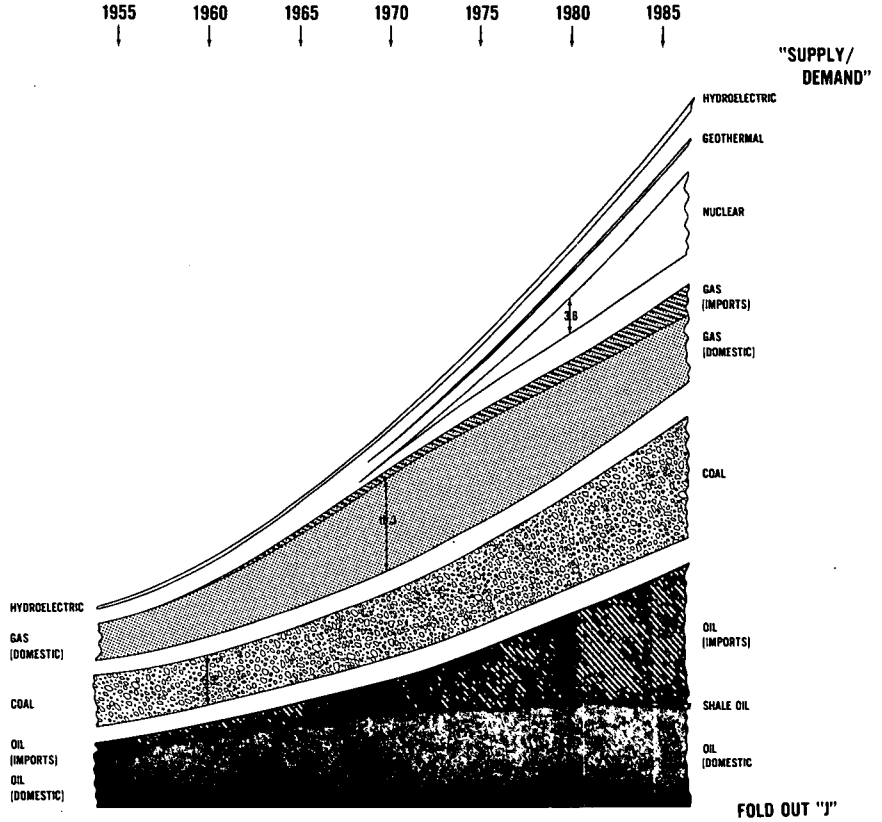
24-027 O - 73 - 6


1955
1960
1965
1970
1975
1980
1985
EFFICIENCY
LOST ENERGY
21.3
USED ENERGY
LOST ENERGY
18.9
USED ENERGY

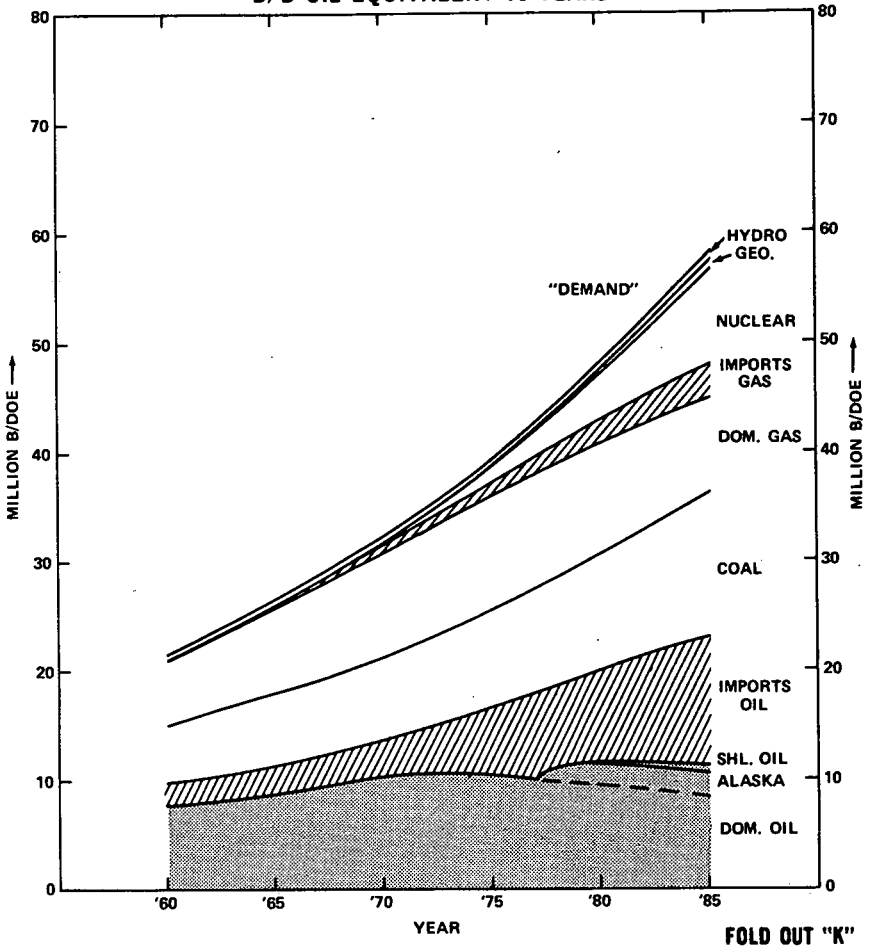
FOLD OUT "6"


1955
1960
1965
1970
1975
1980
1985
END USES
RESIDENTIAL & COMMERCIAL
INDUSTRIAL
NONENERGY
TRANSPORTATION
9.9
5.0
12.0
5.3
RESIDENTIAL & COMMERCIAL
INDUSTRIAL
NONENERGY
TRANSPORTATION
FOLD OUT "H"


1955
1960
1965
1970
1975
1980
1985
FORM OF USE
ELECTRICITY
GAS
SOLID
LIQUID
1.2
1.9
ELECTRICITY
GAS
SOLID
LIQUID
FOLD OUT "I"

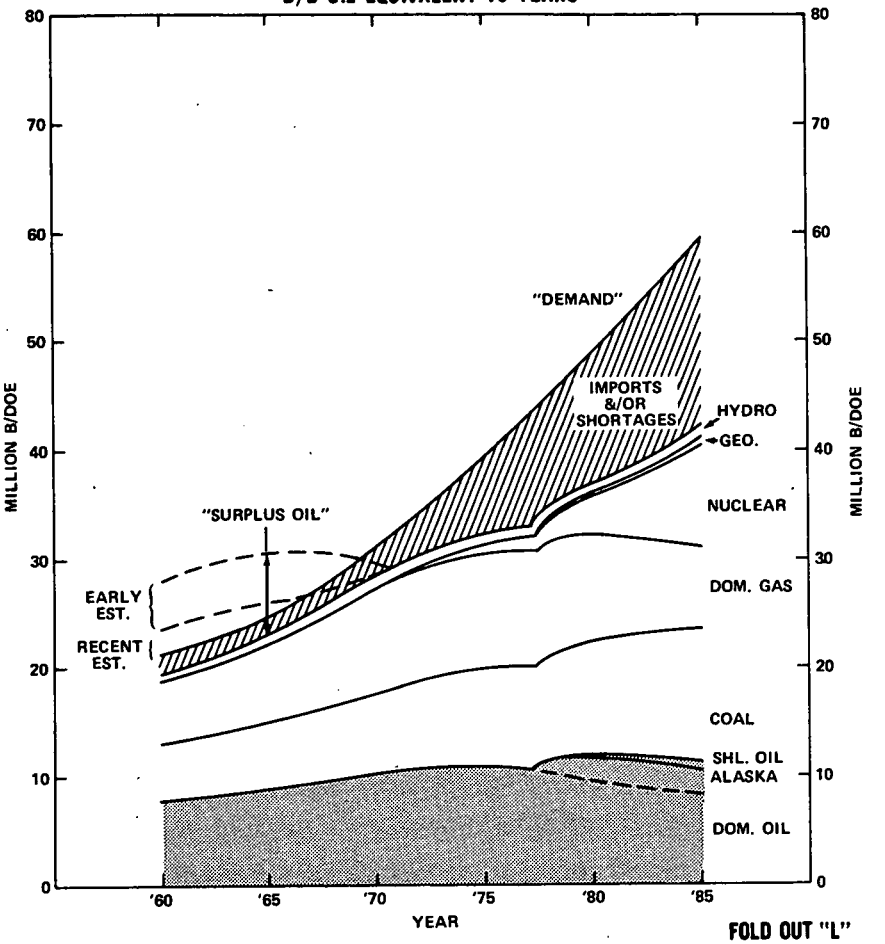

1955
1960
1965
1970
1975
1980
1985
"SUPPLY/
DEMAND"
HYDROELECTRIC
GEOTHERMAL
NUCLEAR
GAS
(IMPORTS)
GAS
(DOMESTIC)
COAL
OIL
(IMPORTS)
SHALE OIL
OIL
(DOMESTIC
HYDROELECTRIC
GAS
(DOMESTIC)
COAL
OIL
(IMPORTS)
OIL
(DOMESTIC)
FOLD OUT "J"

"SUPPLY/DEMAND"
(FROM "ENERGY DISPLAY")
B/D OIL EQUIVALENT vs YEARS

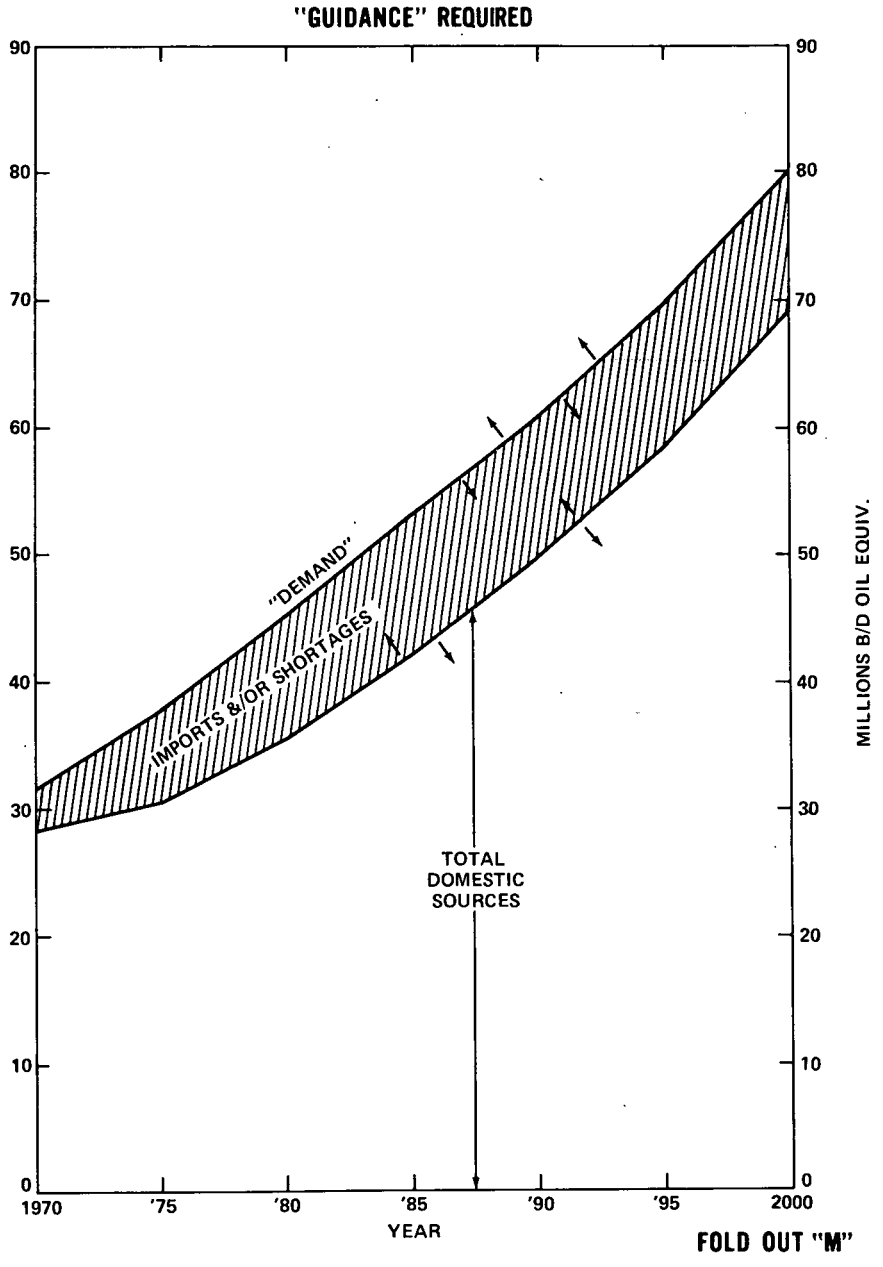


FOLD OUT "K"

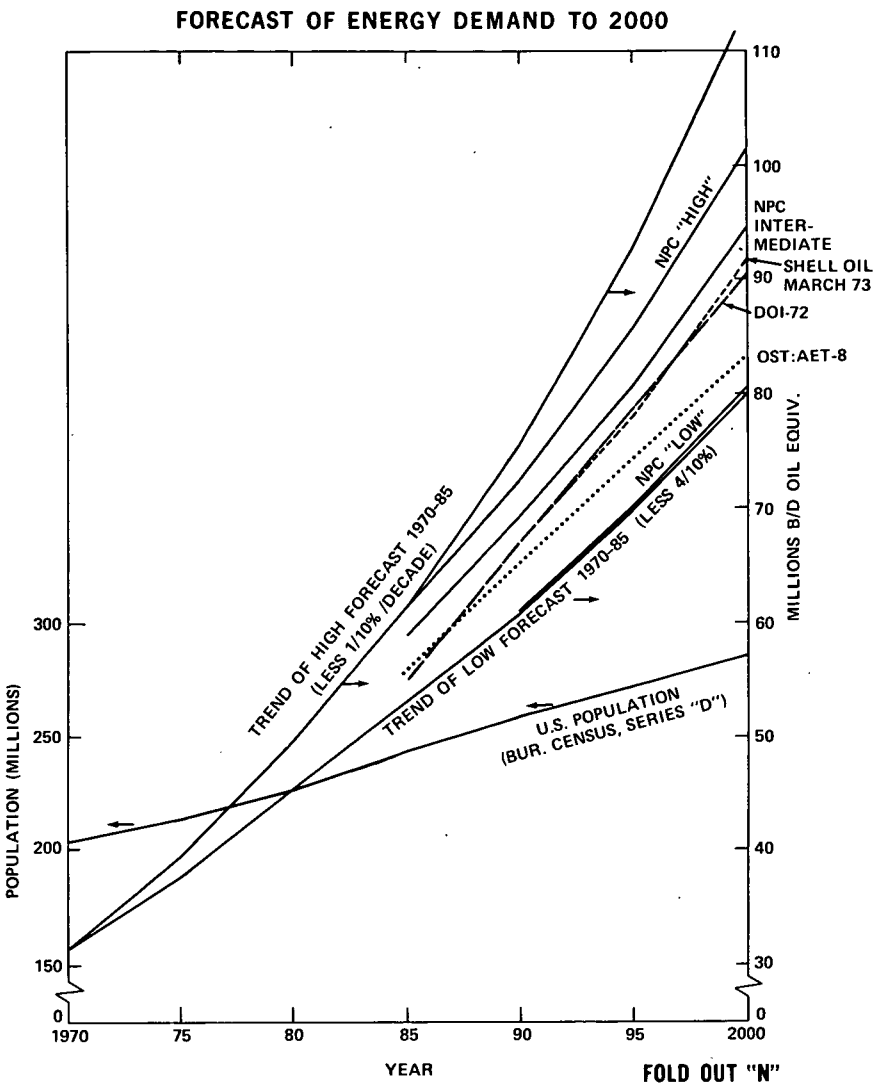
"SUPPLY/DEMAND"
(1960-1985)
B/D OIL EQUIVALENT vs YEARS

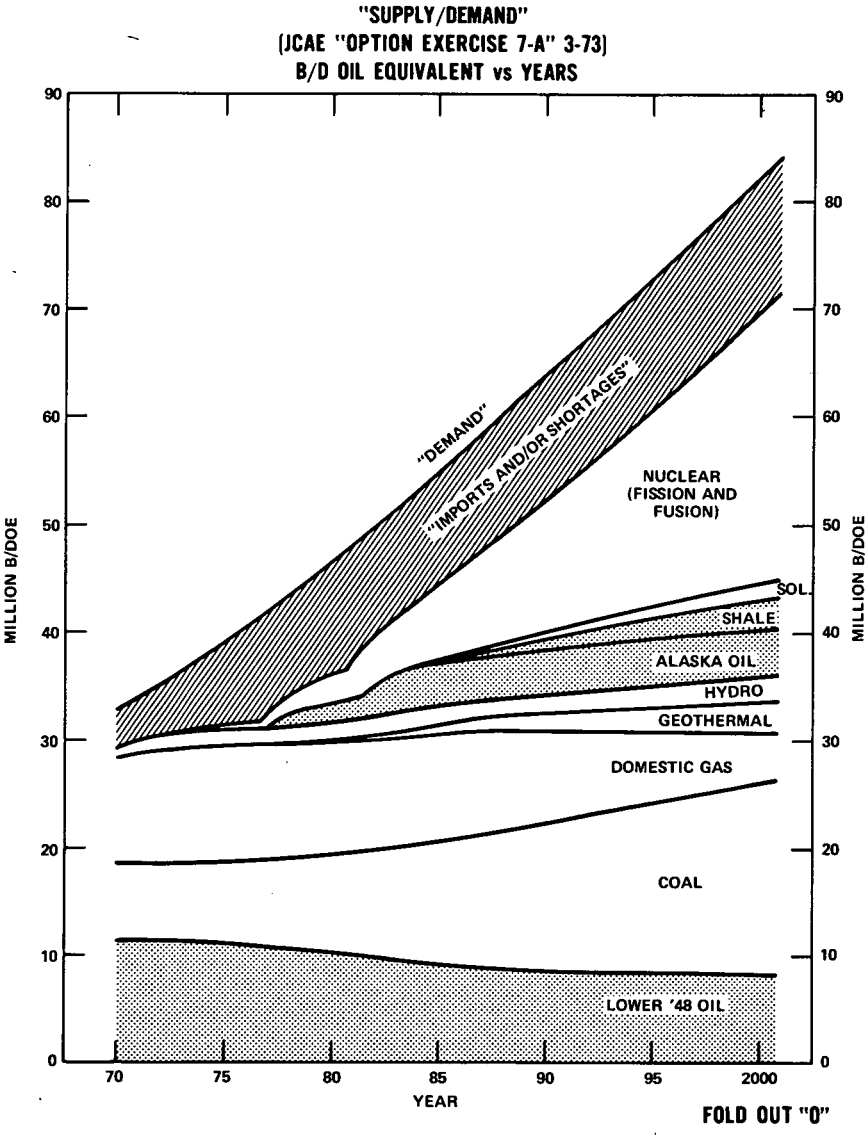


FOLD OUT "L"


"GUIDANCE" REQUIRED
90
80
70
60
50
40
30
20
10
0
"DEMAND"
IMPORTS &/OR SHORTAGES
TOTAL
DOMESTIC
SOURCES
1970
'75
'80
'85
'90
'95
2000
YEAR
MILLIONS B/D OIL EQUIV.

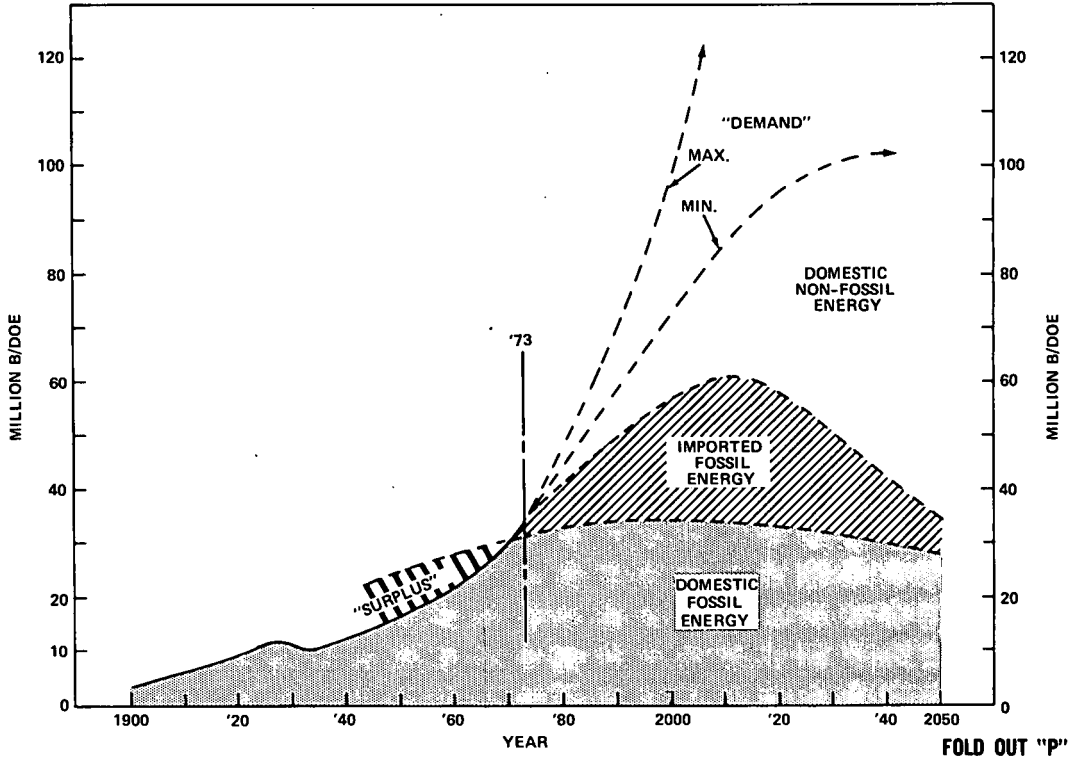
FOLD OUT "M"


FORECAST OF ENERGY DEMAND TO 2000
110
100
90
80
70
60
50
40
30
0
NPC "HIGH"
NPC INTER-MEDIATE
SHELL OIL MARCH 73
DOI-72
OST:AET-8
NPC "LOW"
TREND OF HIGH FORECAST 1970-85 (LESS 1/10% /DECADE)
TREND OF LOW FORECAST 1970-85 (LESS 4/10%)
U.S. POPULATION (BUR. CENSUS, SERIES "D")
MILLIONS B/D OIL EQUIV.
POPULATION (MILLIONS)
300
250
200
150
0
1970
75
80
85
90
95
2000
YEAR
FOLD OUT "N"


"SUPPLY/DEMAND"
(JCAE "OPTION EXERCISE 7-A" 3-73)
B/D OIL EQUIVALENT vs YEARS
MILLION B/DOE
MILLION B/DOE
90
80
70
60
50
40
30
20
10
0
"DEMAND"
"IMPORTS AND/OR SHORTAGES"
NUCLEAR
(FISSION AND
FUSION)
SOL.
SHALE
ALASKA OIL
HYDRO
GEOTHERMAL
DOMESTIC GAS
COAL
LOWER '48 OIL
70
75
80
85
90
95
2000
YEAR

FOLD OUT "0"

"SUPPLY/DEMAND"
(1900 - 2050)
B/D OIL EQUIVALENT vs YEARS



FOLD OUT "P"

Chairman HUMPHREY. May I ask a couple questions, Mr. Bridges? Then we'll come to our main witness this morning, Governor Anderson.

Mr. BRIDGES. Yes, sir.

Chairman HUMPHREY. Is it correct to say from your testimony and your displays that, insofar as the relief of any energy shortage between now and 1980, that that is rather remote?

Mr. BRIDGES. We must play with the degree of the problem. If we do a whole series of things, we can probably keep it from becoming a national disaster. If we don't do anything, in a few years we could really be up against a wall.

Chairman HUMPHREY. Today we are using the equivalent of 36 million barrels of oil per day, correct?

Mr. BRIDGES. Yes, sir; in that range.

Chairman HUMPHREY. In that range. What would you say would be the equivalent in the year 1976?

Mr. BRIDGES. Well, I would have to start looking.

Chairman HUMPHREY. Or 1980?

Mr. BRIDGES. Well, I think, in around 1976 we'll probably be in the low 40 million, 42, or 43 million maybe. I could give you exact quotes of projections.

Chairman HUMPHREY. Well, what would you say in 1980?

Mr. BRIDGES. Well, 1980 would go to the mid-50 million.

Chairman HUMPHREY. Go to the mid-50 million. Is there anything that, in terms of refinery capacity, hydroelectric, nuclear, geothermal, or solar, that indicates that we will be able to meet that goal without a very, very sharp increase in our imports?

Mr. BRIDGES. We will probably have to have a fairly sharp increase in our imports almost irrespective of what we do with the other combination you described. Again, I don't want to discourage going after combinations.

Chairman HUMPHREY. Now, let's assume that we have it all, go for that combination of expansion of nuclear research and development, and solar exploration and utilization, and geothermal domestic exploration, all that we can do domestically. Is it a fact that the margin of safety that we have to have will be dependent totally upon what our imports are?

Mr. BRIDGES. To a degree.

Chairman HUMPHREY. Well, what degree?

Mr. BRIDGES. I am not trying to be vague. If we make a major effort on the combinations of the domestic that we have, I think that we could get into the 1980's where our dependence on imports would be more of an inconvenience type dependence than it would an absolute national disaster, is what I'm trying to say.

Chairman HUMPHREY. The leadtime to get into that position is fast running out, is it not?

Mr. BRIDGES. In certain areas it may have already run out, it is obviously fast running out, yes, sir.

Chairman HUMPHREY. Most of what I understood you to say was that most of the improvement that we look forward to has already been committed. Is that correct?

You were saying something to the effect that most everything between now and 1980 is already in design?

Mr. BRIDGES. No, sir. Between now and 1980, for the 7 years, if we can get the supply we have basically committed our demand patterns. If we can get the supply.

Chairman HUMPHREY. If we can get the supply?

Mr. BRIDGES. Yes, sir. If we can get the supply. If we can't get the supply, we will have shortages.

Chairman HUMPHREY. Just sort of, to finalize this, what is your—you are a technician. You are highly regarded. You work for the Federal agencies and with the Joint Atomic Energy Committee. And now you're a technical adviser-consultant with the Georgetown International Center, as I understand.

Mr. BRIDGES. Yes, sir. I am going over there next week.

Chairman HUMPHREY. Yes. Paint for us just briefly what you think the picture is for, let us say, the next decade. What are we up against in this country, in terms of supply as you might relate it to demand? What would we have to do in terms of conservation? What would we have to do in terms of development? Just give us a little picture. I want to know whether I am too pessimistic, or whether I have misinterpreted what you have said.

Mr. BRIDGES. To start off with, all right, I will proceed to contradict this whole thing. I am relatively optimistic, or I would still be in Boulder trout fishing.

I think the country has the facilities to keep the energy situation from becoming literally a national disaster. This does not mean we are not going to have a lot of painful times. The best we are going to be able to do the next few years will probably be a series of tightening up.

Our heating fuel this winter, if we have a cold winter, will get very tight very fast. If we get such problems as the Europeans wanting to keep their refinery capacity in Europe, or we get any real upset in places like the Middle East, this of course could compound it to where it would get to be very serious.

Each one of these shortages that we have makes the next shortage worse. I mean, we're in a heating problem now partly because of our gasoline problem this summer. Our gasoline problem this summer also helped compound our propane problem this winter. So we will keep having that kind of balance for the next few years, almost no matter what we do.

Chairman HUMPHREY. In other words, for the next 4, 5, 6 years at least, we will be doing, as you put it, a tightrope-walking job, balancing off, going through periods of shortages in a particular type of oil product. Is that correct?

Mr. BRIDGES. Yes, sir, that we probably will have just that kind of situation.

Chairman HUMPHREY. And if I understand further, you were saying further, that if we look to 1980 with any degree of hope we are going to have to make an all-out effort in the areas you have described here, in the hydroelectric, the geothermal, the solar, the coal——

Mr. BRIDGES. We should try anything. We ought to build windmills, so we know what it will do, things like this. Because I am convinced that the very determination that the United States applies to the problem is going to be one of our best negotiating devices with the rest of the world as we try to get through these next few years.

Chairman HUMPHREY. In other words, instead of it being totally a sellers' market, if we go into the research and development and exploration program on a massive scale we are in a much better position to bargain on price and supply with the sellers?

Mr. BRIDGES. Yes, sir. We could be, because you know the rest of the world will be working 20 to 30 years from now, too.

Chairman HUMPHREY. The projections of the outflow of dollars, of 20 to 30 billions of dollars, and some of them much higher by the year 1985.

Mr. BRIDGES. The year 1985 is the period a lot of people have used.

Chairman HUMPHREY. That is based on current prices, is it not?

Mr. BRIDGES. It varies. The minimum at $30 billion was based on current prices, and where you get maximum projections, like in the mid-1950's or $70 billion is when people do try to start to anticipate what oil will cost. But when you talk $70 billion, I think they have been guessing at $7, $8 a barrel, in some cases even higher.

Chairman HUMPHREY. What is running now?

Mr. BRIDGES. I think it is passing $4 very rapidly, and up in the five's already, and some people are threatening to charge $6.

Chairman HUMPHREY. What was it 10 years ago?

Mr. BRIDGES. Oh, good heavens! Ten years ago, when you got through with all the maneuvers you were in the $2 ranges, or even in some instances less than that, imported Middle Eastern.

Chairman HUMPHREY. So it has more than doubled in the 10-year period?

Mr. BRIDGES. Oh, yes.

Chairman HUMPHREY. Senator Javits, do you have any questions you would like to ask? And I want to get to this. I brought Mr. Bridges in here to kind of put the picture of the oil and fuel situation in some perspective, because we are dealing with momentary problems here, which we will be doing, apparently, for the next decade. But I thought it was well that we had spread on the record, so to speak, the long term challenge and problem and possibility. And I think Mr. Bridges has been able to do that for us very well in the documents, the publication that is made available by the Joint Committee on Atomic Energy.

Senator JAVITS. I thank you, Mr. Chairman.

Mr. Chairman, there are a few questions I would like to ask of Mr. Bridges, whom I know; I've heard this briefing before. And it's very admirable, and I ask him these questions only because I think it will help in our questioning of Governor Anderson, here at this table, who is your own Governor, and Mr. Dunlop and other witnesses, Mr. Bridges is very well informed.

Mr. Bridges, is there a bottleneck in the United States respecting refinery capacity? You mentioned just now the shift from gasoline to heating oil, both of which use the same refineries, and I question if there is a bottleneck of that kind, which is something we have to do to help ourselves. What is the leadtime?

Mr. BRIDGES. Well, I'm not an expert on constructing refineries, but I understand it is in the range of about 3 to 4 years now.

Senator JAVITS. Well, what about the first question? Is there a bottleneck?

Mr. BRIDGES. Yes, sir. If we had more refining capacity in this country, we would have more flexibility.

Senator JAVITS. So we would help ourselves that way, that is material self-help?

Mr. BRIDGES. Yes, sir, if we had more refining capacity we would be better off; yes, sir.

Senator JAVITS. Secondly, do your figures take any account of the savings of energy which is possible to the American people, from greater insulation, from a greater efficiency in the output of heat from the utilization of existing means—smaller automobiles, traveling at lower speeds, and perhaps even the curtailment of the utilization of automobiles and the profligate way in which we use them?

Again, from the point of view of self-help, what do you say about that? Do your figures reflect any such practices?

Mr. BRIDGES. The demand curve shown on the plastic device does reflect some conservation beyond what we are now doing. It does not reflect all that you listed. We are trying to suggest to members that they should encourage practically any conservation item that they can that won't directly do things as, you know, put things, people out of work.

Senator JAVITS. Well, can you give us a factor, any factor, in order of magnitude as to how your figures take into account the saving? What percentage saving in energy utilization do your figures contemplate by the conservation practices which are utilized in your figures?

Mr. BRIDGES. The conservation practices that are shown on the plastic device indicate the saving of only around 5 or 7 percent.

Senator JAVITS. Now, what do you think is the potential in that regard? How high can we go?

Mr. BRIDGES. This, of course, gets right into the very area that, as a technician, I try to stay away from. If you don't have a powerboat, you might like to curtail use of pleasure powerboats. If you have a powerboat, that becomes a disaster. So where do you go? I really think this is going to be a political decision, in what area that you all can convince the public to do.

Senator JAVITS. Mr. Bridges, I appreciate that, and I am not asking you that question. We will have to decide that. But I would like to get the brackets.

You have cranked in 7 percent. What is the roof, what is the maximum that you could crank in if we took the maximum conservation practice? And I want to know what effect it has on your figures. You are telling us we are heavily dependent on Middle East oil for 10 years. I would like to really know how heavily dependent we are.

Mr. BRIDGES. We could probably pick up another, somewhere between 5 and 7 percent, and this is really off the top of my head, because the weakest area in our data system is in the demand curve and where the real conservation is. We might be able to pick up another 5 or 7 percent before we get into real massive changes in our standard of living. Again, it depends on who you are talking to.

Senator JAVITS. I understand. I agree with you thoroughly.

Now, what difference would that make in your ultimate figure? Would it make a major difference?

Mr. BRIDGES. Yes, sir. Just a few percent makes a major difference because of the nature of the dependence pattern on imports.

Senator JAVITS. Can we get a chart from you on that score, taking the hypothesis that you can double the saving and conservation process? What does it mean to industry?

Mr. BRIDGES. It would be a very weak chart, I'll tell you right now. But I would work with some of the people that I work with in EPA, et cetera, who have been working on this, and I could give you a fairly decent one.

Senator JAVITS. Well, Mr. Bridges, I would appreciate it. I hope the Chair would, just so we have the criterion. I may be the first one to vote against all the measures, but I think we ought to have all the criteria.

Thank you.

Mr. BRIDGES. Thank you.

Chairman HUMPHREY. Congressman Widnall.

Representative WIDNALL. Mr. Chairman, because time is short and you have a lot of other witnesses scheduled this morning, I would just like to say a couple of things.

As I understood your testimony, the most immediate help that the American people can give to the very urgent situation is in the area of conservation of resources. Is that correct?

Mr. BRIDGES. As far as impact goes, I would hate to leave that idea that conservation will solve it. But I think conservation and efficiency improvement was where we all could work, and would have two helps. It would have some impact on our actual energy demand. But I think, more important, it might convince enough of us that the problem is real, and right now we don't believe it.

Representative WIDNALL. Well, I am just talking about an immediate matter as to which we can do something ourselves in order to help a very grievous situation.

Mr. BRIDGES. Immediate would be in the conservation area.

Representative WIDNALL. Nothing else could be as immediate as that. I am not talking about conserving the resources underground and things like that.

Mr. BRIDGES. I understand. You can do things which you have been hearing. Put the thermostat down in the house a couple of degrees and that will help very much. Slow down on the highway, that will help. We tried that this summer, and every time I got on a freeway at 55 I got sucked up in everybody's exhaust pipes. And I think this is what happened to everyone else that tried it. But if you can get the public to do it, that will help. Yes, sir.

Representative WIDNALL. Another question about your testimony. You mentioned that the Japanese are building in 5 years what it takes us 8½ to 9 years to build.

Mr. BRIDGES. Yes, sir, I understand that is true.

Representative WIDNALL. Why is there that difference?

Mr. BRIDGES. It is a combination of factors. They are building identical plants with the identical supplier. The largest factor in the delay here is some of the legal licensing procedures we have established primarily because of environment concerns. But, in addition to that, we are not getting the quality control on the equipment, or building them as well as the Japanese are, to be brutally frank about it. I am the first one that will get up my hackles when someone says the total problem has been our concern for the environment. That is not true in my opinion. Our concern for the environment has definitely delayed specific areas. However, if we had no environmental requirements, if we just eliminated them all tomorrow, we would still

have the same basic energy problem we are facing today in a few years—10 or so.

Representative WIDNALL. Well, I am deeply concerned with what you have alleged, that the Japanese can do the same thing in half the time that we do. It seems to me that we have got to get our hackles up immediately and do something about that delay.

Mr. BRIDGES. Our licensing procedures, et cetera, plus our delays on construction is apparently taking us about 3½ to 4 years, on the average, longer than it takes the Japanese to build the same nuclear powerplant, as so we have been told in our committee.

Representative WIDNALL. That is all. Thank you.

Chairman HUMPHREY. Thank you very much, Mr. Bridges. You have been very helpful, and I know we have put you to a great duress to get you here. You were in Seattle, Wash., yesterday and you came back. Thank you very much.

We now have as our witness, and I want to ask the Governor's understanding of this, we felt it was important for the board we have Mr. Bridges' testimony in. I think it makes your testimony more meaningful. I am very pleased to have as our witness this morning our Governor from the State of Minnesota, who is without trying to flatter this record and himself, has done an admirable job as our chief executive. He is wrestling with the problems in Minnesota that we are having here with the fuel shortage.

Governor Anderson, without further ado, we welcome your testimony.

STATEMENT OF HON. WENDELL R. ANDERSON, GOVERNOR OF MINNESOTA

Governor ANDERSON. Thank you, Mr. Chairman, and members of the subcommittee, and ladies and gentlemen.

Two hours ago in Hibbing, Minn., the temperature rose to 22 degrees. At Duluth it was 24 degrees. At International Falls it was 26 degrees. In the southern part of the State, at Winona, they were basking at 32 degrees. The furnaces in Minnesota are going today, and next spring at your cherry blossom time, the lakes and rivers in Minnesota will still be covered with ice and snow. And many weeks after that, when you are thinking about putting on some light summer clothing, we might be considering putting the skates and skis away. We're not sure.

In nothern Minnesota, often as a joke someone will say we are very lucky this year. Summer was on a Sunday. But it makes, I think, a relevant point.

I was rather shocked to read in the morning Washington Post these two or three sentences which I would like to bring to your attention:

> The supporters of mandatory controls in the Treasury and Interior Departments believe that six of the most northern States in the country might get no more than 60 percent of their fuel supplies this winter. The more isolated regions in Vermont, New Hampshire, Maine, and the upper Midwest could be held to half their fuel supply unless rationing allocates more for them.

It would appear, Mr. Chairman, that the tougher your winter is, the colder your weather, under our present system the poorer your chance of receiving the energy supply that you need.

Last December we had an unusually cold month, and it was, I think, the first time we fully realized just how serious the energy crisis was. In the third week of December in 1972 we received some 290 requests for aid from school districts, hospitals, businessmen, and the rest.

Chairman HUMPHREY. What month was that, Your Honor?

Governor ANDERSON. That was the month of December 1972.

But I don't want to dwell on that. I want to talk about something that I think is a difficult point to get across. In spite of the fact that we had a crisis situation that we were going into in January and February, we were given a remarkable set of circumstances that had not occurred in over 50 years.

In January 1973, we had the warmest January in over 50 years. With it came the temperatures that we normally don't experience. In January, you can count around 17 days of below zero temperatures. This January, we had only 9. In northern Minnesota, International Falls has a normal temperature in January of 3°. By that, you should recognize that when we talk about mean temperature, that 50 percent of the time it is colder than 3°. Duluth has a normal temperature in the month of January of 8°. Again, 50 percent of the time it is colder than 8°. In January of 1973, the temperatures in International Falls and Duluth were on the average over 5° warmer than normal.

Usually, half of our February temperatures are subzero. Temperatures of 20° to 30° below zero for extended stretches of time are not uncommon. But this year the lowest temperature recorded in February was −12°.

Mr. Chairman, I would like to give you an idea what a difference in temperature means in heating the average three-bedroom home. When the temperature averages 18° for a week, the normal December temperature in Minnesota, it takes 35 gallons of fuel to heat that home. Last December, there was 1 week when temperatures averaged 5° below zero. It takes 52 gallons of fuel oil to heat a home at that temperature.

Multiply this figure throughout the State, and you can see where we would have a major fuel oil disaster if the weather had not been unseasonably warm for Minnesota for January and February. Clearly, Minnesota survived the shortage last year, not because of the foresight of State government or Federal Government, or the foresight of private industry. We were saved because we had an unprecedented warm January and February.

But in spite of the fact that we were blessed with that kind of weather, I would like to just review very quickly some of the problems that we experienced. Our metropolitan transit commission, which serves over half the people in the State, was within 3 days of terminating service because of their inability to find suppliers. Just recently, our State office of civil defense conducted a survey of our 435 school districts; 250 have already responded. Only 20 percent of those are confident of an adequate fuel supply this winter.

Now this would mean potentially over 700,000 of our students could be denied some of their schooling for a day or a week or a month, depending upon how serious the crisis is this winter.

Our leading weather forecaster, Joe Strub, this week predicted that we are going to have a colder winter than usual in Minnesota.

On Tuesday of this week, the St. Paul Dispatch, our leading paper in St. Paul, had this story, and I'll only read the headline and one

sentence but I will make it available for the members of the subcommittee: " 'School Closings To Save Fuel.' The idea to close schools during January and February,"—they are talking about the entire months, now—"has been suggested as a solution to the fuel problem," indicating the seriousness of this fuel situation, the St. Paul fuel situation in the St. Paul schools for this winter.

But our schools are not the only public institutions that are affected. A survey of municipal and county government officials shows that 80 percent of these communities have been unable to negotiate firm long-term fuel oil supply contracts. Instead, they face an uncertain winter on a week to week basis. Many of these municipalities operate hospitals, nursing homes, and ohter community facilities.

The point I'm trying to make, that in some parts of America, if you don't have sufficient heating oil, you have to put on a sweater. You might be slightly uncomfortable. But in Minnesota and other States like Minnesota, if we don't receive adequate supplies of heating oil, it can be a matter of public health. It can be a matter of life and death. It can be a matter where the pipes freeze and people freeze.

My wife, just last week, called some heating oil companies to see if we could get some fuel oil for a little house. She did not indicate that she was the Governor's wife. She just called, "I'm Mary Anderson and I would like some heating oil." She was not very successful, so I had somebody yesterday call some 55 distributors for fuel oil, and just call and say, I'm a housewife, we need some heating oil. What can you do for me? She did not receive one single positive reply. Normally, it was just a rejection or a laugh or a scoff. On occasion, there was someone that said, maybe we can do something for you, but you are going to have to call back.

Now, that's the situation in Minnesota today.

I know that you've had testimony here that the national shortage might be 2 to 3 percent, might be 10 to 15 percent, might be 30 percent. But we are at the end of the fuel energy supply list. Any time you have a crisis someplace else of 5 percent, it is magnified by the time it gets to Minnesota.

Chairman HUMPHREY. Governor, may I interrupt to say that that's the kind of information that generally does not get to Washington. We do deal with these major national percentages, and you are bringing to us the specific of a State that could be amplified by going into North Dakota, South Dakota, Wisconsin, upper Michigan, Montana, all across the northern belt of our country. And what you are indicating to us is that these national statistics of general averages have to be interpreted in terms of regions and areas and districts and individuals, and then it becomes a serious matter.

Governor ANDERSON. Mr. Chairman, I would like to make just one more point, and I would like to call on Jon Wefald, who is a commissioner of agriculture, just to testify very briefly as to how the crisis affects our farming.

I had the opportunity to visit with John Love this morning, who is a former colleague, a friend of mine, whom I have a very high regard for. I tried to make some of these same points, and I left a copy of my prepared statement with him. But I told him, in 1951, I had an opportunity to visit his hometown of Colorado Springs as a member of a hockey team. And it was no exaggeration to say that when we

Minnesotans went to Colorado Springs in the wintertime we thought that this was something like the tropics. And John Love thinks that the Colorado winters are rather difficult, but not by Minnesota standards.

Again, I don't know what the total and complete answer is. Minnesota is not going to receive its fair share, in my judgment, unless we have mandatory controls, mandatory allocations. Otherwise we are going to be shortchanged.

If we know we are going to get 90 percent of what we need, or 85 percent of what we need, then we can make some intelligent reasonable plans. Otherwise, I think we are going to have great chaos and great trouble.

I would like to call on my commissioner of agriculture, Jon Wefald, just to testify how the energy crisis affects agriculture in Minnesota.

Chairman HUMPHREY. By the way, Governor, your entire prepared statement will be made part of the record at this point.

[The prepared statement of Governor Anderson follows:]

PREPARED STATEMENT OF HON. WENDELL R. ANDERSON

Mr. Chairman, members of the committee, I am Wendell R. Anderson, Governor of the State of Minnesota. I want to thank you for the opportunity to share with members of this committee some of the problems we in Minnesota have faced relative to the fuel oil shortage. I also shall discuss the bleak outlook for the coming winter in my State.

But before I present this testimony, Mr. Chairman, on behalf of the people of Minnesota, I would like to thank you for your personal efforts in this very critical problem. The energy crisis affects every citizen of this country. If all public officials were as willing as you to speak out on the energy crisis and to seek the decisive Governmental actions that are required, we would be much closer to solving our problems. All Minnesotans appreciate your strong leadership.

A year ago in Minnesota, there was no talk of a fuel shortage. But by late November and December, the situation had changed abruptly.

Let me just take a moment to describe to you the severity of the weather. An early cold and wet fall hit the Midwest in 1972. While rainfall was nearly normal in November, the December rainfall was almost twice the average. In December the normal temperature is 18 degrees. But, in 1972, it was 11 degrees. During December, we normally can expect 8 days of below zero weather. But last year we had 14 days in December.

Minnesota and the Midwest of course, have previously experienced cold periods during the fall. But, the supplies of fuel oil and other energy had been adequate. In 1972, the situation was different. Fuel oil was not available in sufficient quantities. The cold weather placed a critical strain on our fuel supply system. The lowest temperature recorded the entire winter was in December. That does not happen often in Minnesota.

My office was flooded with urgent requests for fuel oil from distributors, schools, nursing homes, hospitals and homeowners. In the third week of December alone, we received 290 calls for assistance.

In most instances, fuel oil supplies would have been exhausted in a matter of 24–72 hours. "We need oil," our distributors told their suppliers. "There is none," was the answer time and time again.

In Long Prairie, Minnesota, the school board came within 8 hours of closing the entire school system. With the assistance of the state office of civil defense, fuel oil was found but at a premium price. Toro Manufacturing, a Minnesota based garden equipment manufacturer, exhaused its supply of secondary fuel, L.P. Gas, at its Bloomington plant which employs over 800 people. No more L.P. Gas was available. The company had two choices—shutdown or pay an extra charge for natural gas—10 times the normal price. The company chose the latter course.

The situation was seriously aggravated when several petroleum suppliers announced they were ceasing operations in Minnesota. Bell Oil and Triangle Refineries discontinued their independent operations. Clark Oil withdrew from the heating oil market. Gulf Oil announced its intentions to discontinue Minne-

sota operations at the end of 1973. The Midland Cooperative, a major source of petroleum to the rural area, closed its refinery because of a lack of crude oil. In addition, the operation of the Koch Refinery at Pine Bend, Minn., was hampered by a labor strike.

I cannot over emphasize how difficult those weeks were for Minnesotans. Then miraculously we were given a reprieve. January arrived and with it came the mildest temperatures in 50 years. Normally, in January we can count on around 17 days of below zero temperatures. This past year we had only 9.

Parts of our state are exceptionally cold. International Falls on the Canadian border has a normal temperature in January of 3 degrees. Duluth has a normal temperature of 8 degrees. In January of 1973, the temperatures in International Falls and Duluth were on the average, over 5 degrees warmer than normal.

Usually, almost half of our February temperatures are sub-zero. Temperatures of 20 to 30 below zero for extended stretches of time are not uncommon. But this year the lowest temperature recorded in February was 12 below zero. God certainly looked with favor this past year on his relatives in Minnesota.

Mr. Chairman, I would like to give you an idea of what a difference in temperature means in heating the average three-bedroom home. When the temperature averages 18 degrees for a week, the normal December temperature in Minnesota, it takes 35 gallons of fuel oil to heat that home. Last December there was 1 week when temperatures averaged 5 degrees below zero. It takes 52 gallons of fuel oil to heat a home at that temperature. Multiply this figure throughout the state and you can see why we would have had a major fuel oil disaster if the weather had not been unseasonably mild.

Clearly Minnesota survived a fuel oil shortage last winter for one reason alone. Not because of the foresightedness of government. Not because of the efficiency of fuel oil suppliers. We survived simply because we had an unprecedented mild winter.

But many crises still confronted us.

In January, the Metropolitan Transit Commission, which serves the seven-county Metropolitan area, was close to shutting down all bus operations. The prospect of more than half of our citizens being without bus service because of lack of fuel brought the energy crisis home to many Minnesotans for the first time.

The commission supplier, Standard Oil, was able to provide only 75 percent of the previous year's allocation. A frantic search ended when the commission purchased the required fuel from Canadian sources at a 70 percent higher price. The commission was within three days of terminating service for the last four days of January until the February supply arrived. If that would have happened thousands of people in our metropolitan area—the aged, the disadvantaged, the poor, and students—would have been stranded.

The people of Princeton, a small city north of Minneapolis, found themselves low on diesel fuel for their electric generating plant. They instituted drastic conservation measures, such as curtailing all evening activities at their schools. Eventually, they solved their problem with purchases of fuel at prices in excess of 80 percent above the normal price.

Throughout the winter, 165 independent Minnesota gasoline stations were forced to close their doors when their past supplies were no longer available. A regional independent dealer, Metro 500, closed its 28 stations. They remain closed to this day. In southwestern Minnesota, the Ripley Oil Company was forced to discontinue service at its 40 locations.

It is hard to predict what the upcoming winter will bring. Only a miracle will keep temperatures at the abnormally high levels experienced in January and February, 1973. If one could forecast at all, you could rather expect a normal Minnesota winter, which Time magazine has called, ". . . as hard as the ice age."

Our leading weather forecaster this week predicted a colder than normal winter. He has statistics to show that when summer temperatures are higher than normal—as they were this past summer—the area can expect a colder than usual winter.

In preparation for the coming winter months, the state office of Civil Defense has recently conducted several surveys which indicate that we can expect substantial, perhaps critical, shortages of fuel oil in the coming heating season.

In Minnesota, there are 435 school districts. In a recent survey, of 250 of those who responded to our inquiry, only 20 percent are confident of an adequate fuel

supply this winter. If the complete results show such a percentage for all districts, fuel shortages could confront 80 percent of them. That means, potentially 735,000 students could be denied their education for a day, a week or longer this winter.

I have here a copy of Tuesday's St. Paul Dispatch. The headline reads "School Closings To Save Fuel Mulled." The St. Paul school board is seriously considering closing schools during January and February. The school board is short of fuel oil. The maintenance director was quoted, ". . . (t)here are no good prospects for getting any."

Mr. Chairman, schools are not the only public institutions affected. A survey of municipal and county government officials indicates that 80 percent of these communities have been unable to negotiate firm, long-term fuel oil supply contracts. Instead, they face an uncertain winter on a week to week basis. Many municipalities and counties operate hospitals, nursing homes and a variety of other urgently needed community facilities.

In Minnesota, cold weather is not merely uncomfortable, causing a person to put on another sweater. In Minnesota, a freezing day without heat can literally mean death. Around our state, many residents of nursing homes and patients in hospitals are facing this possibility confined in facilities whose operators cannot guarantee the heat, literally needed to keep them alive. You and I know that we would not let that happen.

Let me tell you of two other examples to illustrate the problem.

My wife and I have recently purchased a small farm a few miles east of the Twin Cities, in Washington County. Just this week, my wife, Mary, phoned not 1, not 2, but 6 fuel oil dealers before she found one willing to supply a paltry 265 gallons of #1 fuel oil to heat the farmhouse on our property this winter. The usual response when she phoned was: "You're kidding; we don't take new customers."

Yesterday, I tried an experiment. I had a member of my staff call all the fuel oil distributors in the metropolitan Twin Cities area. He told each supplier that he was contemplating purchasing a home that would require 1500 gallons of fuel to heat it this winter, which is a modest quantity. Of the 55 distributors contacted, 40 percent could not supply him fuel. One in ten said maybe and could give no definite answer until after October 1st. Five suppliers were out of business since June, when the telephone directory we used was published. Many suppliers said prices were changing from day to day. They were receiving literally hundreds of calls for fuel each day.

In Minnesota, we do not produce oil. It must all come from outside the state, as do all our energy supplies. We are completely dependent on these outside energy sources to meet the energy needs of our citizens and businesses. In addition, we are at the end of the oil and gas distribution system. We literally get what remains after other states take their share from the pipeline.

In 1972, Minnesota consumed 1.4 billion gallons of heating fuel. Assuming a normal increase in demand of 6 percent, we will consume nearly 1.5 billion gallons in 1973. Demand for fuel oil is increasing at an unprecedented rate. During the 1960's demand for fuel oil in Minnesota increased about 3 percent per year.

Mr. Ligon, director of the Office of Oil and Gas, Department of Interior, stated before this subcommittee Tuesday that the national demand for fuel oil grades 1 and 2 will increase over 10 percent this heating season. If his forecast is correct, this would mean that we would need more than 1.5 billion gallons of fuel oil for this winter. This is 137 million more gallons than consumed last year. This additional gallonage for Minnesota alone is large enough to fill the largest oil tanker operating in the world, not once, but twice.

During discussions of the fuel situation last spring in Washington, industry spokesmen estimated shortages for this winer of 2 to 3 percent of demand. The State office of civil defense foresees the very real possibility of a 15 percent shortage of supplies in Minnesota. Your committee estimates run as high as 30 percent.

Mr. Chairman, national predictions of 2 to 3 percent mean a 10 to 15 percent shortage in Minnesota. Any national shortage is magnified in Minnesota because we are at the end of the distribution system. A 10 percent shortage nationwide would, of course, mean a catastrophe for Minnesota.

We have looked and we continue to look for assistance from the Federal Government to avert disaster in Minnesota this winter.

In May, a voluntary allocation program was announced by the Federal Government. At the very outset, it was doomed to failure. Many fuel suppliers stated openly and categorically that they could not and would not abide by such programs. Others stated that they would try to implement the voluntary program.

It appears that most suppliers have attempted to comply. Many have found, however, that the program was not compatible with their own marketing systems and have long since abandoned it. Still others have found the temptation of high profit in a period of rapid turnover, too much for their patriotic consciences. They, too, have fallen by the wayside.

That is what happens to voluntary systems.

On August 9, Governor Love, the President's energy assistant, proposed a mandatory allocation program. However, I was disappointed in his letter to me regarding the program. He declared, "I have concluded that we should not adopt a mandatory allocation system for petroleum and petroleum products at this time."

I can understand Governor Love's unwillingness to impose a governmental mandatory control program on a private free enterprise system.

I have faith in the ability of the free enterprise system to meet the needs of our citizens and of our businesses under normal conditions. However, it is clear to me that the energy crisis is an emergency greater than private industry can handle by itself. Private industry must work with Government in a cooperative effort to meet the problems of the energy crisis.

A mandatory allocation program would not solve all of Minnesota's problems this coming winter nor would we expect it to. But a mandatory allocation program would make a difference.

It would mean that there would be more equitable distribution of the available supply throughout the nation. In addition, the program would make available a portion of each suppliers' product as an emergency pool to be distributed by State government to priority customers when emergency situations occur.

A mandatory allocation program is the only way we in Minnesota can have a reasonable estimate of the supply of fuel oil available to us and institute the necessary conservation measures to equalize demand with supply.

That is the first strong recommendation I make to this subcommittee today. You must insist that the administration immediately institute a mandatory fuel allocation program. If the administration continues its present reluctance to implement such a program, the only alternative is for Congress to act.

Mr. Chairman, I know your committee is holding these hearings primarily to assess the potential impact of a shortage of fuel oil in our country this coming winter.

But the lack of fuel oil is only one of our critical problems. In Minnesota, we face equally severe shortages of propane. In fact, the propane shortage is even more critical because we have so little time to respond to it.

As of this date, the number one industry in Minnesota and in the midwest, agriculture, is facing the monumental task of harvesting, processing and transporting to market a record-breaking crop. This year 15 percent more land is under cultivation in Minnesota than last year. Our farmers are doing their utmost to feed Minnesota and the world.

Minnesota farmers planted 6.2 million acres of corn this year, up 10 percent. So far, soybean production is up 47 percent. The 1973 wheat crop is estimated at 80.2 million bushels, compared to 49.3 in 1972.

Propane is essential for successfully harvesting these crops and for turkey and livestock brooding. If Minnesota farmers do not have the propane necessary to drive their equipment and dry their crops, then we not only face a fuel shortage, we will have a food shortage as well.

The president of the Minnesota Farmers Union, and a long-time friend of yours, Mr. Chairman, Mr. Cy Carpenter, testified on September 7th at a special hearing called by Governor Love at the White House on the propane situation. Mr. Carpenter called for an immediate program for mandatory allocation of propane.

I talked to Mr. Carpenter yesterday. He reiterated to me his position that a mandatory allocation of propane is essential. He said it could make the difference between a successful harvest and a crop disaster with severe economic losses for thousands of Minnesota farmers.

Minnesota consumed approximately 500 million gallons of propane in 1972—30 percent or 150 million gallons for all kinds of farm use and 70 percent for

industrial and residential home use. The demand for propane in 1973 is expected to be 550 million gallons. Based on 1972's consumption, we will run 50 million gallons short. However, using the projected 1973 demand for propane, we could be as much as 100 million gallons short.

It is my understanding that on Tuesday, a mandatory propane allocation plan had been prepared by the Department of Interior and submitted to Governor Love for his approval.

In my meeting this morning with Governor Love, I urged him to act immediately to implement a mandatory propane allocation program. I stressed to him that if this was not done, farmers in the southern and west central portions of Minnesota may be short as much as 40 percent of the propane necessary to harvest and dry their corn crop and prepare the fields for next spring.

I need not explain to this committee the value of American agricultural products in world trade today. We need them to feed the world and balance our trade deficit. The value of the dollar is down internationally. Its trading value is in jeopardy.

National demand for oil at this time approximates 17 million gallons per day. The best our domestic oil fields can produce is about 11.5 million gallons. We are entering an era where we could easily be importing more than 50 percent of our nation's petroleum needs. We must be able to count on our food production as bargaining power, to obtain the oil we need.

Our commodities have more trading value than our money. Oil-rich nations can use our wheat, corn and soybeans more than they can use our dollars.

Mr. Chairman, there is still some time left for the administration or the Congress to impose a mandatory allocation program for fuel oil. That luxury does not exist for propane. Every day that passes brings us closer to an agricultural disaster. We need a propane allocation system now. This week, not when the farmers are out of gas.

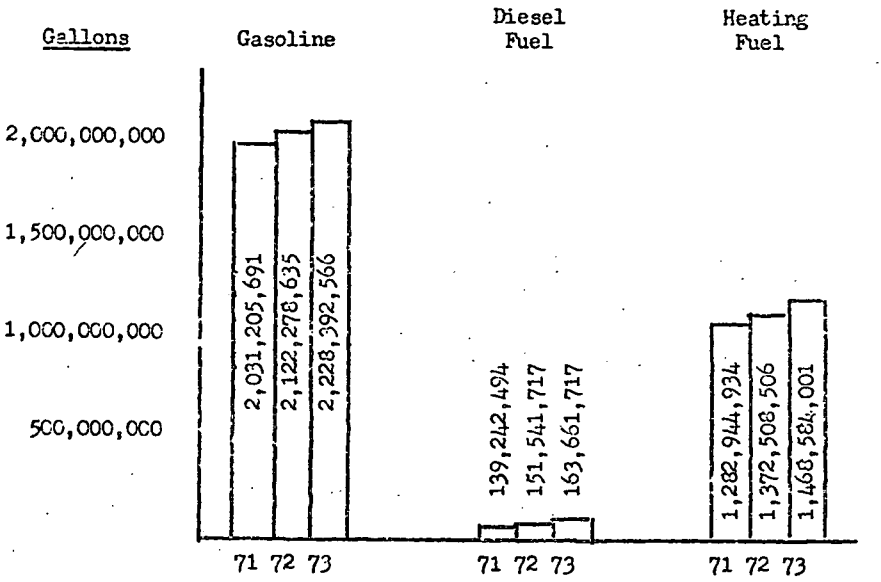
I have spoken today mainly about solutions to critical, short time fuel supply problems. But overall demands for energy are increasing at nearly exponential rates. As governmental officials, we must do more than act to allocate available supplies. Certainly we need to expand our supplies of current sources of energy. We must also act to develop new alternative sources of energy. Most importantly, Government at all levels must take the lead in a positive program to conserve energy so that the total energy supply will met our basic needs.

The energy crisis demands bold, innovative and decisive action by Government. Certainly we have to re-evaluate the American reliance on the automobile. We must see that our homes, businesses and appliances are built to utilize energy in the most efficient way possible. I agree with the President. We must have an energy conservation ethic.

Mr. Chairman, I thank you for the opportunity to speak before your subcommittee today.

[Attached are several charts which depict the energy situation in Minnesota.]

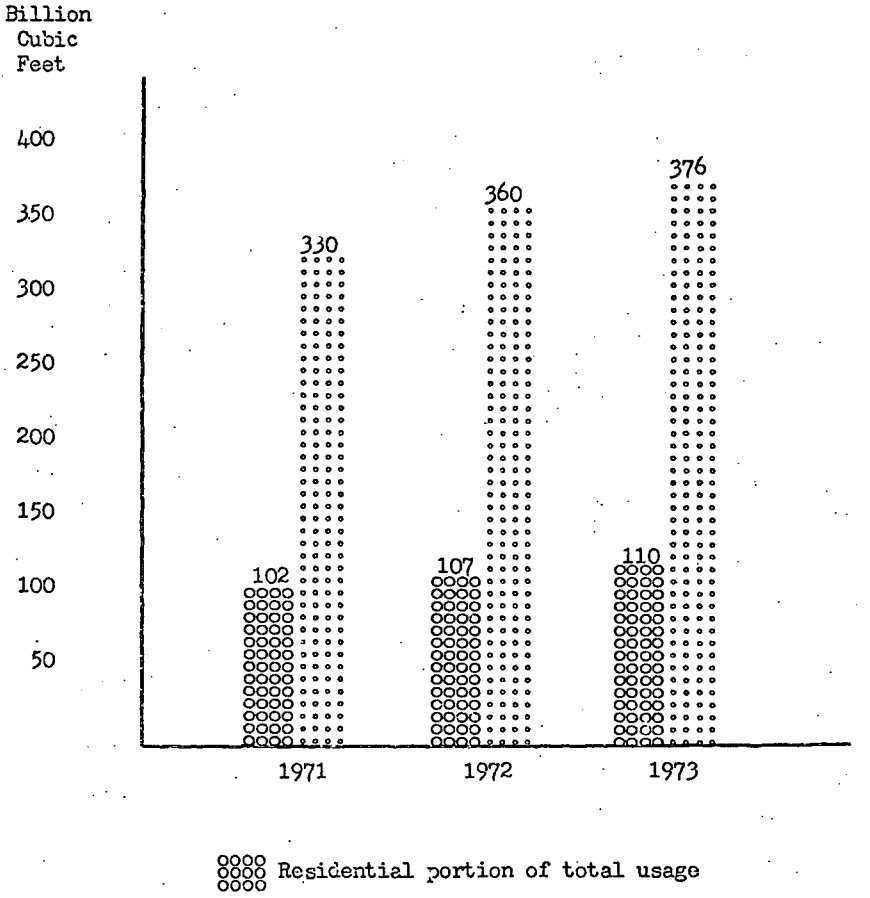
FUELS



1. Gasoline and Diesel usage will be up more because the Agriculture Department Retired Acres Program was changed and more land entered active cultivation. Also, many western counties experienced severe weather which greatly reduced field cultivated production last growing season.

2. Fuel Oil figure represents total usage in State. At this time, we do not have breakdown of figures for interruptible standby portion in relation to residential usage.

NATURAL GAS

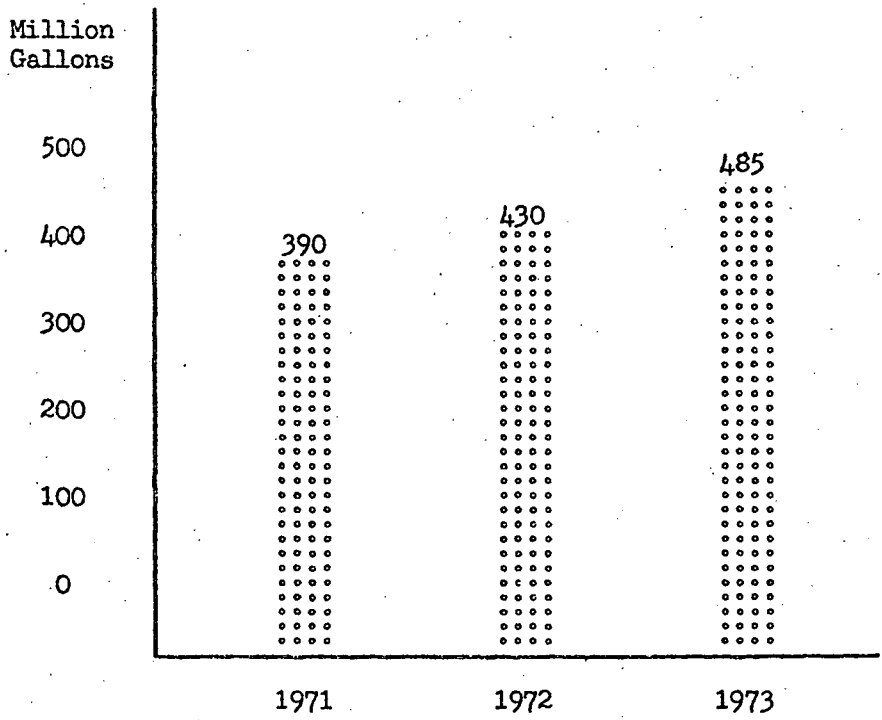


1. Minnesota has never had a curtailment of firm gas, and pipeline companies do not see one for this heating season.

2. Interruptible service is going into effect by most companies at 30 degrees which is 15 degrees above the 1971 temperature.

CONSUMPTION OF PROPANE IN MINNESOTA

(HD-5 SPECIFICATIONS ONLY)



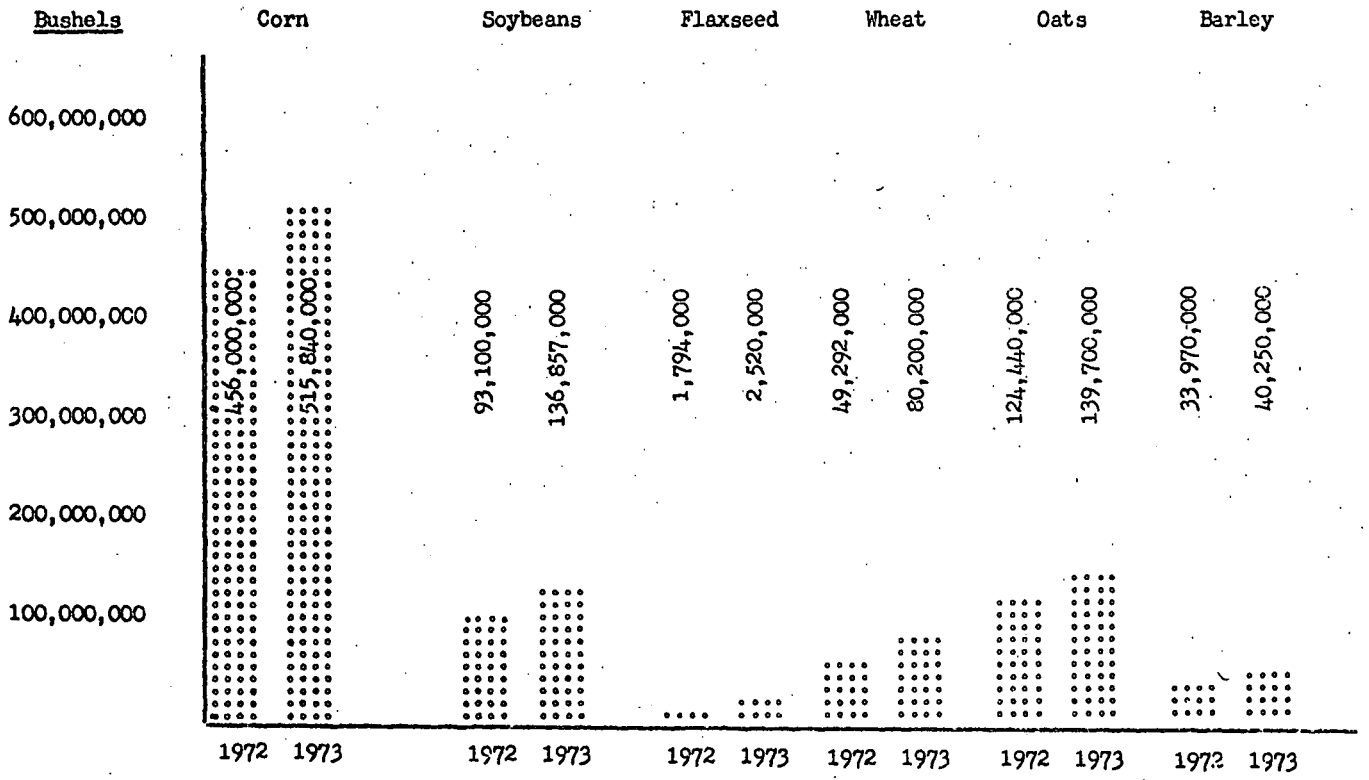
1. Annual growth has been 10% per year.

2. Early phase restrictions on parts of LP Gas industry could aggravate normal marketing shortage this heating season.

3. Minnesota companies have built more than 125 Propane standby facilities that will begin operation this heating season, diverting already short gallons from normal marketing channels.

4. Weather conditions have stimulated a bumper corn crop in southern third of State. Inadequate crop drying allocation could siphon off substantial gallons of residential reserves.

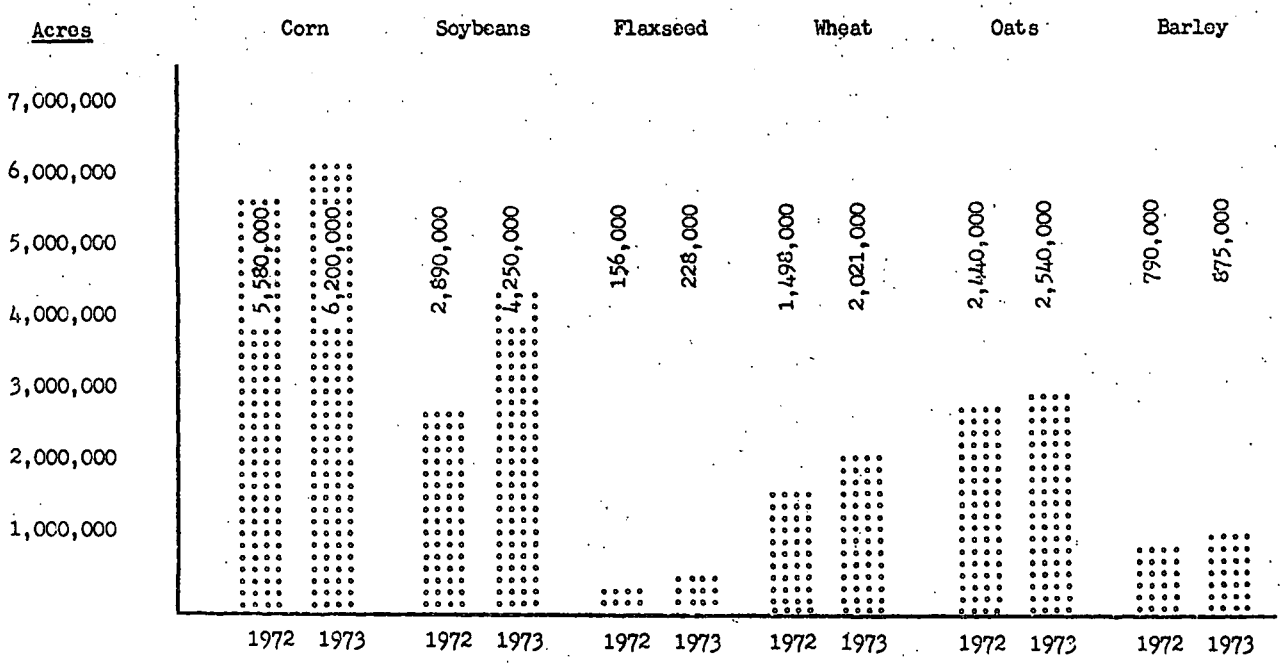
PRODUCTION PROSPECTS



MINNESOTA'S 30-MILLION ACRES OF FIELD CROPS

Crop acreage in Minnesota in 1973 will be 14 percent more than in 1972.

CROP ACREAGE



Chairman HUMPHREY. Commissioner Wefald, I recognize you and welcome you to the witness stand.

STATEMENT OF HON. JON WEFALD, COMMISSIONER OF AGRICULTURE, STATE OF MINNESOTA

Mr. WEFALD. Mr. Chairman, members of the subcommittee, I am Jon Wefald, commissioner of agriculture for the State of Minnesota.

Chairman HUMPHREY. Good and loud. I know you well enough to know that you can talk good and loud.

Mr. WEFALD. I am happy to be here to testify on the fuel crisis that affects agriculture in America, especially in Minnesota.

Agriculture is the major industry in America today. It certainly is in Minnesota. Over 40 percent of our State's economy is geared into agriculture-related industry. Now, we had great crops in 1969, 1970, 1971, and 1972, and I think you could say this is true throughout all the United States of America.

But I think everyone knows today that we've got a shortage of food. Certainly, everyone knows in the United States of America that we don't have enough food. Now, our farmers in Minnesota, and I think it is true throughout the country, have responded to this challenge. Out of 60 million roughly idle acres last year, 43 million of those acres are in production this year.

For example, in Minnesota, our land in production is up 15 percent. Or to use several other examples, we are expecting over and above last year 12 percent more corn, 30 percent more soybeans, 62 percent more wheat. To put another way, the only thing we are going to be down in out of all the major grain crops would be rye.

The production is out there, Senator. It is a great crop. It is a record crop. It is a crop that is worth $2 billion, and that's from Minnesota alone.

Now, the point of it is, that crop is not going to do anybody any good unless we get it out of there. And very importantly for American agriculture, and less for corn, sunflower seeds, to a great extent our soybeans, especially if this fall is going to be as cold and as wet as the National Weather Bureau thinks it is going to be, we have got to dry it. That takes LP gas.

We figure, right now, just recently, conservatively, that we are 20-percent short of the LP gas that we need to dry those crops. Now, this is a very important key point. If we get the production out of there, and this is a record crop, then we have got to be in a position for storage, for selling, for shipping, to have that dried. And that takes millions of gallons of LP propane gas. The way we figure it now we are not going to have enough.

Everybody understands that food prices have risen sharply in the last year, very sharply. Now, if we are going to get the food to the people in this country at reasonable prices, given that record crop that is out there, it is our opinion that one way to help that considerably is to have mandatory fuel allocations, which means an equitable distribution of the fuel and LP gas in America. Then I think Minnesota would get its fair share, and I think agriculture, which is going to be so keyed to our economy in the next years for balance of trade

or balance of payments, for decent reasonable prices for consumers everywhere.

We have got to have that, Senator, and hopefully tomorrow.

Chairman HUMPHREY. We produce a lot of turkeys. Have the turkey growers talked to you about LP propane?

Mr. WEFALD. Senator, they have, Minnesota is the No. 1 turkey State in America. We grew roughly 23 million birds last year. We expect to grow that many this year, and they use for every production year about 100 million gallons of LP gas. And I think you could say it is somewhat questionable as to whether that supply is going to be there.

Chairman HUMPHREY. And if you do not have that gas, the bird dies. Is that true?

Mr. WEFALD. Absolutely. As the Governor said so well, January, February are cold in Minnesota, and I understand from the turkey growers that if that heat goes off, 24 hours later there are no birds.

Chairman HUMPHREY. Governor, do you have another witness that you would like to——

Governor ANDERSON. This is Mr. Jim Erchul, director, civil defense division, department of public safety, State of Minnesota, who has testified before the committee on two other occasions. I don't think he has to testify, but I thought, depending on the questions, it might be appropriate for him to comment.

Chairman HUMPHREY. Congressman Widnall, do you have some questions you would like to ask?

Representative WIDNALL. I think I will pass up any questions. I think you have made the situation very, very clear. We have an unusual situation here because of the colder weather in Minnesota as compared to the other States. I think you have certainly represented your State well in bringing our attention to the immediate problem there, and I certainly believe that it should receive special attention.

Governor ANDERSON. Thank you.

Chairman HUMPHREY. Senator Javits.

Senator JAVITS. Governor Anderson, I would just simply like to express my pleasure at having you before us. I know your State is one of the most progressive in our Nation. It is a beautiful and delightful place to be, and I have many close personal ties with that State. And I am much impressed with the testimony, and I think you are right and the agricultural commissioner is right. I am thoroughly with you on the question of allocations. I think that is the only way to run a democratic society, and I hope very much that we go that route. And I hope that we soon find out from Mr. Dunlop whether we are on it. Thank you.

Governor ANDERSON. Thank you, sir.

Chairman HUMPHREY. I have a few questions, Governor, that you or one of your associates here might want to respond to.

You indicated to us, Commissioner Wefald, the importance of the fuel supply to the Minnesota agricultural situation. The question that comes up many times, Commissioner Wefald, and you may be the one to answer this, is, why is it that we need it in that part of the country? What is so unusual about it that we need propane gas for drying?

Mr. WEFALD. Well, Minnesota, for example, is the fifth leading State in corn production.

Chairman HUMPHREY. It is what?

Mr. WEFALD. Minnesota is the fifth ranking State in terms of corn production. Now, just last year, to use that as a rough estimate, over 80 percent of that corn, Senator, had to be artificially dried. You know we don't have the old corn perkers any more, and it is a far more complicated or sophisticated situation. Our farmers are the most efficient businessmen almost anywhere in the world, and they have got an investment in machinery that defies belief unless you actually see it.

Now, just in terms of the corn, 80 percent of that was dried last year and, as Joe Strub has indicated, the next 30-day forecast for Minnesota looks like it is going to be wetter and colder than normal. So, if it was 80 percent last year, given the fact that soybeans is first up and we are harvesting soybeans right now, and the next 30 days are crucial there. I have had a lot of farmers and elevator managers tell me that they are afraid that they are going to use up their available supply of LP gas drying soybeans, because they expect the wetter year, and won't have enough left over for sunflower seeds and corn.

Chairman HUMPHREY. Why do they have to dry? I think I know, but for the subcommittee here.

Mr. WEFALD. Basically, we have got a situation right now in Minnesota where many buyers have told our corn farmers that they won't buy it unless they have dried it down to 15.5 percent. And for a lot of our farmers, when they harvest it out in the field, it can be 30, 25 percent, depending on the weather conditions for that harvesting.

Chairman HUMPHREY. Then that is 30 percent moisture.

Mr. WEFALD. And given the transportation today, and the unavailability of boxcars and all the rest, our buyers are going to be real choosey, and given the fact that we are trying to market 4 year's worth of crops in 1 year, and here we have a heavy crop coming this year, they are just telling our farmers, look, if you don't dry your corn down to 15.5 percent, if you don't have your soybeans down to 13 percent moisture, not only are we going to dock you for it, we probably will not even buy it.

Chairman HUMPHREY. So you have two or three situations. No. 1, the weight because of the moisture.

Mr. WEFALD. Right.

Chairman HUMPHREY. No. 2, the price goes down with moisture.

Mr. WEFALD. Right.

Chairman HUMPHREY. No. 3, if you have moisture and it is left in the product, it tends to deteriorate and destroy nutrient value. Is that not a fact?

Mr. WEFALD. No. 4, we do not leave them in the fields over winter any more.

Chairman HUMPHREY. No; we cannot; we do not.

Governor, has anyone made, over at the University of Minnesota, in your department, or the Office of Economic Development, any computations as to the fuel oil and gas shortages?

Mr. ERCHUL. Mr. Chairman, the economic impact has been gaged by our economic development people. We find it such a complex matter, it touches on everybody's very economic life, their homelife, their social

life. You cannot measure it at all in terms of dollars and cents. We are taking now in terms of extreme emergency, physical discomfort, and we are not looking at it in terms of economic loss at this point.

Chairman HUMPHREY. You are not looking at it in terms of economic loss?

Mr. ERCHUL. Well, we have not had the capacity to study it that way. We surely recognize it, sir, as being a terrific loss, but we just have not had the opportunity to take a look at that measure because of the fear of what is happening otherwise. We have had to just devote all of our time to just staying alive, so to speak.

Chairman HUMPHREY. Now, you have to wrestle——

Governor ANDERSON. On that point, you might be interested in this, at our office we have received calls from businesses and they have said to us, we want to expand our plant in Minnesota. Unless you can guarantee to us a heating supply for the difficult winters, we are not going to be able to expand here. We may have to do it someplace else where they can guarantee the supply, or go to a State that is a producer State.

So we do have that kind of economic problem, but it is very difficult to assess a dollar figure to it.

Chairman HUMPHREY. Mr. Erchul, you have had to wrestle with the whole problem of trying to get supplies when they are in short supply. I know that a year ago, for example, you took some emergency actions, going to Canada, getting some fuel oil, and bringing it down to the State of Minnesota.

The Governor has testified as to the survey that has been made of our schools. Have you talked with business people that have indicated their concern that they may have to close down this winter because of tight fuel?

Mr. ERCHUL. Mr. Chairman, they have expressed a very real concern. The business people in our State have themselves formed energy groups, and are dedicating a great deal of energy themselves behind it and money to study this, and measure what the impact is going to be on their businesses. And they are trying to do everything they can to cooperate with Government in putting forth an effort for conservation, so that we can get through without too much of an impact on their economy.

Chairman HUMPHREY. I know you have been a vigorous advocate for mandatory fuel allocations, as has the Governor here this morning in his testimony, and Commissioner Wefald. What is your estimate as to what would happen in our State if we do not have mandatory fuel allocations? What is your judgment? What do you see in light of what the weather predictions are, what the estimates are as to temperatures, et cetera? What is the outlook?

Mr. ERCHUL. Well, Mr. Chairman, the outlook in Minnesota is very bleak. We have taken a very close look at some of the things that Mr. Bridges was outlining for us here in his demonstration, and we see self-imposing of many of these conservation methods. The idea that the St. Paul's schools are exploring for closing in January and February is something that we have asked all school districts around the State to look at, to put into their planning for this winter the planning of having to close in the very cold months. Our estimates indicate that

they can save a very large percentage of their fuel if they close those two very coldest months.

We are talking with industry the same way. We are looking in every possible position as to where we can reduce temperatures, where we can abandon the use of buildings that don't have to be heated. Of course, most places you have to keep buildings heated to above freezing, so we cannot cut off heat totally in very many places. We have explored the idea of carpools and a positive program of mass transit.

Governor Anderson has embarked on a program with his State government, a very positive program of conservation, which Commissioner Brubaker has assured us is already working.

We have set a goal of reducing our State consumption in State government somewhere between 10 and 15 percent, and we think it is a goal we can attain.

Chairman HUMPHREY. Have you heard from the railroads at all? When I was there, as you may recall, Mr. Erchul, this last spring, we had the M & St. L and the Great Northern Burlington testify as to the danger of diesel shortage for their locomotives.

Mr. ERCHUL. It was the same story. Just this week, we got a couple of letters from the railroads, and they have told us once again, their suppliers are notifying them that they will not be able to continue to supply them in the manner that they did last year after October 1.

So we have that one to face now. We had not anticipated it. We thought they were pretty well fixed after last spring, but apparently it is going to crop up again this fall.

Chairman HUMPHREY. Senator Percy, would you wish to question?

Senator PERCY. Yes, thank you very much.

I am particularly pleased to welcome a fellow midwesterner, and say that I think that the bistate arrangement that we have is working out very well. We earn our living in Illinois and take our vacations in Minnesota, and I read your ad in Time magazine on how much that costs. I think it is fine.

I would like to ask what it is like to be Governor of the State that has two Presidential candidates, possibly, in 1976? Does this present any problems to you? You do not have to answer that.

Chairman HUMPHREY. I might say, that comes from another one, a very likely one, that is.

Senator PERCY. We are all very shy and bashful.

Governor, I would like very much to ask you about what you feel the effect will be if we cannot in the Midwest get adequate supplies of propane to take care of our agricultural needs? In your prepared statement, you talked about the propane crisis in Minnesota and the necessity for farmers to have the use of propane, especially during the coming harvest.

What affect will it have on the United States if we cannot get in the great agricultural States, in the Midwest certainly, adequate propane? What affect would this have on prices, on food prices, and on income?

Governor ANDERSON. Just our judgment, Mr. Chairman and Senator, and members of the subcommittee, but it would be an economic disaster. Very difficult, again, to put a dollar figure on it, but obviously there are crops that would be wasted. There is no question but we are going to have schoolchildren who will have to stay at home. We are going

to have hospital and nursing homes where they will have to shut down. We will have factories closing down.

All these things will come. To what degree, I don't know, unless we have mandatory control.

Senator PERCY. Governor, I feel we have used hotlines in the past. We have got one, with the support of Senator Humphrey and at the insistence of Adlai Stevenson, to Moscow. What would you think of a hotline from farmers all over this country directly to the Department of Agriculture or to John Love's office on energy?

If they see the crisis and they cannot meet the needs, and they cannot get distribution, and we know there is enough supply around the country, maybe maldistribution, what would you think of having a hotline so that farmers could call in and say, we canot solve this problem? We need some help.

Governor ANDERSON. Very proper. I would rather have a pipeline that would send us some energy, but I would settle at this point today, at this moment, for a hotline.

Senator PERCY. Well, maybe we midwesterners can get together and get a hotline developed on this, and it might help.

Have the companies which supply the independent oil distributors in your State claimed that they can supply the consumer directly, or are they just going to take the chance that we are going to have a cold winter to some people?

Governor ANDERSON. Most are very dependent, sir. A tremendous number of them are already closed down. They are out of business or closed down. Independents are just in terrible shape. We are dealing primarily with the major suppliers.

Senator PERCY. Do you support a mandatory allocation program?

Governor ANDERSON Absolutely.

Senator PERCY. And if we do not do that now, what do you perceive as the possible crisis in Minnesota this winter? Governments, generally I have found, deal with the immediately urgent rather than the ultimately important. Now here is the chance to look ahead and try to anticipate. If we are going to lie on our knees and pray we have a mild winter, we know in the Midwest that that does not always happen.

Governor ANDERSON. In the morning Washington Post, and I just read the statistic before you arrived, there are Interior Department officials who are supporting mandatory controls, I believe. The small New England States and the upper Midwest States of Minnesota, the Dakotas, Illinois, and Wisconsin will only receive 60 percent of their fuel supplies, and I would have to think that their estimates are accurate.

Senator PERCY. Lastly, I would like to give John Dunlop an opportunity to think ahead on the question that I intend to put to him. As he knows, I have an office full of irate, angry gasoline station operators—I think there were about 40, and my office is not very big and bulging at the walls. I grabbed my hotline to John Dunlop to ask him what he was going to do.

These men are pressed to the walls themselves. They claim they are going out of business. Every gallon they pump with a 7-cent margin they are losing money on it. And if you have ever seen 40 angry men, they were really angry.

Unfortunately, Mr. Dunlop was at a meeting at the time, and I was out of town when he called back, so I will put the question to him.

So, are your gas station operators right now as irate in Minnesota as they are in Illinois?

Governor ANDERSON. No question about it. But as I say, it is very sad, but many of them are not out of business. They have just had to find new ways to earn a living. But the tragedy has already affected our State. It hit us earlier. But the majority of them are already out of business.

Senator PERCY. So, we hope that Mr. Dunlop will have an answer to my question, also.

Thank you very much, Governor.

Chairman HUMPHREY. Governor, on behalf of the subcommittee, we thank you, first for your patience to permit us to hear from Mr. Bridges this morning, and we thank you, Mr. Erchul and Mr. Wefald, for your testimony. It has been very helpful. It is the sort of thing that the country needs and that the city of Washington needs. Thank you, I know you are busy men.

Mr. Dunlop, we understand some of the constraints on your time this morning. We will try to move right along.

Before Mr. Dunlop's testimony, I would like to place in the record the article from the Minneapolis Star, August 7, entitled "Many Schools Can't Obtain Oil Contracts, Face Crisis."

There is a report entitled "Preliminary Outlook for the Winter 1973–74." I would like to include that in the record. It is prepared by the Long Range Prediction Group of the National Weather Service; also place in the record a bulletin that we received from the Independent Gasoline Marketers Council, a memorandum to all Senators and Congressmen stating that a mandatory allocation bill is vital to the wholesale and retail gasoline business.

[The documents referred to follow:]

[From the Minneapolis Star, Aug. 7, 1973]

MANY SCHOOLS CAN'T OBTAIN OIL CONTRACTS, FACE CRISIS

(By Betty Wilson)

Many school districts in the state cannot get contracts from fuel-oil dealers and face a crisis in obtaining heating oil for the coming season, State Civil Defense Director F. James Erchul reported yesterday.

Responses to a survey by Erchul's office showed that 105 school districts have been unable to get a firm commitment or that prospects are poor for heating oil supplies for this winter. So far, 186 school districts of 436 in the state have replied to the survey.

Most of the districts returning the questionnaires said they have advertised for bids but received no offers. Some have advertised unsuccessfully as many as three times. Most school districts normally by this time of the year have signed contracts for fuel-oil supplies for next winter.

Erchul said in some cases local dealers are telling the schools they will "take care of you," or will do their best, but do not want to sign a contract, mainly because of uncertainty over fuel-oil prices.

He said some dealers are signing contracts, but leaving the price open to allow for future price increases.

School officials in the questionnaires returned to Erchul estimated they will have to pay 18 to 20 cents a gallon for No. 2 fuel oil this winter compared with the 11 to 13 cents per gallon paid last year.

Erchul said he expects districts which in the past have had regular large suppliers will be able to get enough oil without a contract.

But, he said, "Anyone who doesn't have a contract for fuel has a crisis. If more oil isn't brought in in the next couple of months, some of these people who are very unsure about supplies are going to be out."

The Rosemont School District, for example, has been unable to get a contract from fuel-oil dealers for the 210,000 gallons of heating oil it needs this winter, and will be unable to operate schools through December unless a supply is found.

Akeley in Hubbard County will be forced to close its schools Nov. 1, unless fuel is found, because the district has been unable to get the 50,000 gallons of fuel oil it needs for the coming year.

The Villard School District in Pope County needs 45,000 gallons of fuel oil, and has been "getting the runaround" from suppliers, say a school official.

The districts are typical of responses in the survey.

Some schools districts said they are adding new storage tanks to try to stockpile heating oil.

Some school districts, including Centennial in Anoka County, indicated in the survey they may switch to natural gas or to No. 5 fuel oil, a heavier oil, because it is more available. But some districts said they recently made expensive changeovers from the No. 5 fuel oil to the No. 2 oil to meet state pollution standards, and said they cannot change back.

PRELIMINARY OUTLOOK FOR WINTER 1973–74

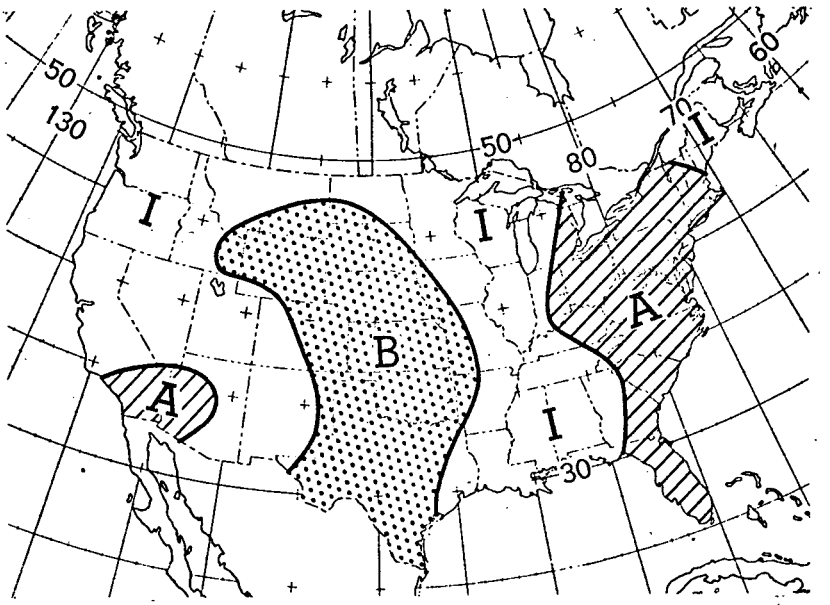
(By the Long Range Prediction Group, National Weather Service, NOAA, Sept. 4, 1973)

The attached chart shows a pattern of winter average temperatures based on the statistical tendency of certain features of the upper-air circulation over North America and the Pacific to persist or recur from two, three, or four seasons earlier, and on the normal relationship of average temperatures to the projected upper-air flow pattern. The probabilities quoted on the chart call attention to the fact that this outlook must be used with great caution, since it implies only a very small shifting, in the shaded areas, of the normal (50–50) odds on warm and cold winters. The probabilities have been conservatively estimated from the verification scores of our fourteen-year series of experimental forecasts prepared at the beginning of each season. The regular winter outlook in the series, carrying somewhat stronger odds than the preliminary versions given here, will be prepared near the end of November.

DONALD L. GILMAN,
Chief of Group.

PRELIMINARY OUTLOOK FOR WINTER 1973-74

Average Temperature



A — Above Normal, 55% chance of occurrence

B — Below Normal, 55% chance of occurrence

I — Indeterminate, 50% chance of Above Normal, 50% chance of Below Normal

NOAA National Weather Service
Long Range Prediction Group

September 4, 1973

INDEPENDENT GASOLINE MARKETERS COUNCIL,
Washington, D.C., September 17, 1973.

Memorandum to All Senators and Congressmen:

ALL INDEPENDENT MARKETERS AGREE!

A mandatory allocation bill is vital to the wholesale and retail gasoline business.

1. Such a bill must effectively assure all independent competitors that they will be able to find sources of supply for a fair share of the available gasoline, including domestic output and foreign imports. Also, independent refiners must be effectively assured that they will be able to buy as much crude oil as is needed to operate their refineries at near capacity.

To do these things, the bill should say, in effect, that all marketers with a current shortage of gasoline should be able to purchase as much as they did in 1972, plus a percentage share of increased output and imports, and that all refineries with a current shortage of feedstocks should be able to purchase the additional amounts needed to run their refineries at near-peak levels of production.

2. Such a bill must be effectively enforceable, both by public authorities and by private parties. Also, such a bill must be easily administered with a minimum of interference by the government in the business of matching buyers with sellers.

To do these things, the bill should provide for both government and private enforcement of mandates, with both injunctive relief and damages plus costs for injured parties. The bill should direct the Administration to issue a general mandate that all marketers are entitled to their 1972 volumes and supply relationships, unless it is "impossible" to reestablish them, and to issue special mandates to individual purchasers that will enable them to seek their own sources of supply for their own shortages.

A "shortage" would be filled if and when a marketer purchased his 1972 volume, adjusted for changes in marketing facilities, if any, plus a proportionate share of increased output as determined by the administering governmental office. For example, 6 percent of 1972 volumes may be added to reflect the growth output and availability for 1973.

An "impossible" situation would exist if a crude source began to dry up or a refinery broke down or a pipeline became inoperative, but it would not exist because a new contractual commitment had been entered into after the curtailment or termination of the 1972 supply pattern.

Chairman HUMPHREY. Mr. Dunlop, we have your prepared statement and if you for purposes of time would like to compact it and just talk from it, and get to some of the questions that I know are bothering us, such as the ones that Senator Percy asked, well, then, you just proceed according to your own design.

STATEMENT OF HON. JOHN T. DUNLOP, DIRECTOR, COST OF LIVING COUNCIL

Mr. DUNLOP. Mr. Chairman, I think I might talk informally and read a couple of sections, and take about 10 minutes, at which time I would be happy to answer any questions, try to answer any questions of the subcommittee.

First of all, I would like to express my appreciation for appearing before this Subcommittee on Consumer Economics because I think it is the balancing of interests of consumers, and producers that is the heart of many of our economic stabilization problems.

On May 11 before the Senate Banking, Housing and Urban Affairs Committee, I said the following: The Cost of Living Council is aware that energy prices must be allowed to increase somewhat in order to stimulate development of new energy reserves. At the same time, the Council's responsibility is to prevent significant inflationary price increases. There is a potential conflict between, first, allowing the

energy industry price flexibility to attract the capital necessary to develop additional energy resources and to tap higher cost sources on one hand such as imports from abroad, and, two, preventing significant inflationary price increases on the other hand. The stabilization program rules for the oil industry have been carefully designed with these two difficult objectives in mind.

The next preliminary point I would like to make, Mr. Chairman, is that you and all members of the committee, I am sure, are aware that the authority under section 203(a)(3)—the allocation of authority has been delegated to the Director of Energy Policy Office, and that none of that authority is in the Cost of Living Council.

Now, the next observation that I would like to make is just from the point of view of consumers and price control. How serious has been the rise in prices in the area you are investigating? First, with respect to the consumer prices, as you are aware, between January and July, fuel oil prices have gone up 10.6 percent, or at an annual rate of 22.2 percent. Gasoline has gone up at 7.3 percent in this same period, or at the annual rate of 15.2 percent.

This area of petroleum, in addition to food, is one of the twin focuses of inflation this year in the United States. To put it another way, the cost-of-living index from January through July has gone up at the annual rate of 7.4 percent. Without fuel or food, the rate would have been only 4.1 percent.

At the wholesale level, a profile of inflation is even more impressive. The whole index has gone up 26.4 percent on an annual basis. From January to August fuel oil prices have gone up at an annual rate of 72.5 percent and gasoline at the rate of 63.6 percent.

So we are dealing with a very high inflationary sector of the economy.

Now, the next observation I would like to make, Mr. Chairman, is to take just a couple of minutes to try to present very systematically the total complex of regulations that we have designed to deal with the petroleum industry, and I am referring to appendix B to my prepared statement, which is a general statement which the Council has issued on price behavior and price control in the petroleum industry as a kind of straightforward exposition of the control mechanism we have.

I think it is important to see the interrelationship between the problems and control among domestic crude producers, refiners and retailers.

Phase IV rules establish a comprehensive system for controlling petroleum prices at all levels, from the oil that is pumped out of the ground to gasoline sold to motorists, or No. 2 heating oil sold to homeowners. Phase IV price controls also take into account international transactions, controlling the passthrough increases at prices at which foreign products may be sold in this country.

First, as to domestic crude oil. Special rules apply to domestically produced petroleum. A fixed ceiling price has been established for domestic crude petroleum pumped from oil fields in the United States. This ceiling price is the May 15, 1973, posted price for crude oil in each U.S. oil field plus 35 cents per barrel. Depending upon the grade and quality of the crude oil, this ceiling price is about $1 below the world price.

Since current levels of domestic crude production are insufficient to meet demand, Phase IV rules create an incentive to encourage production of additional quantities of domestic crude petroleum. This incentive program operates by releasing from the ceiling prices so-called new oil, oil produced above last year levels, plus an adjustment for the remainder of current production. This additional production, the new oil, is not covered by the price ceiling and may rise to market levels. This is generally characterized as a two-tier pricing system for domestic crude.

Now about refiners. After it is pumped from the ground, crude petroleum is shipped to a refiner where it is refined into an array of petroleum products, gasoline, heating oil, diesel fuel, lubricants, solvents, and many other products. Phase IV rules require refiners to establish base prices for these products calculated on the basis of May 15, 1973, prices plus increased costs of imports and of domestic crude petroleum. The rules prohibit price increases above base prices in transactions involving these products unless the increases are cost-justified and until the refiner files a price increase prenotification, with a 30-day waiting period, to the Cost of Living Council. These rules are similar to the phase IV rules covering the industrial sector of the economy by permitting price increases above base only to recover increased costs and only on a dollar-for-dollar basis. They apply to all sales by refiners to wholesalers, jobbers, and other resellers of these products.

Resellers purchase petroleum products from refiners or from other resellers and resell them, sometimes to jobbers or wholesalers, other resellers, and sometimes to retailers, the people who sell the products to the consumers. Phase IV rules limit prices charged in these transactions to the actual cost of the product plus the markup which the reseller applied to the sales he made on January 10, 1973.

Now, a word about retailers. Phase IV rules establish ceiling prices at retail for sales of gasoline, heating oil and diesel fuel. For gasoline and home heating oil, the ceiling prices are the dealer's cost for products on August 1, 1973, plus his January 10, 1973, dollar and cent markup with a minimum markup of 7 cents per gallon. The rule is the same for diesel fuel but with no minimum markup. For other petroleum products, prices may not exceed the actual cost of the product plus the actual dollar and cent markup applied by the retailer in sales on January 10, 1973.

Different ceiling price rules apply to retail sales made directly by refiners because products reach the retail market through a series of intracorporate transfers, rather than arm's-length transactions establishing market cost and prices. Ceiling prices for these retail sales are the May 15, 1973, selling prices, adjusted to reflect increased cost of imports and increased cost of domestic crude between May 15 and July 13, 1973. Under the rules, gasoline dealers must post their ceiling prices and the minimum octane ratings for each grade of gasoline on each gasoline pump.

Imports. Phase IV price controls also reflect the reality that the United States is becoming increasingly dependent upon imported foreign petroleum. World prices for foreign oil are far in excess of U.S. prices and consumers in other countries are bidding for foreign oil just as we are. Consequently, since companies must pay a higher price

to import foreign petroleum products, phase IV rules permit pass-through of these increased import costs in the form of higher prices. The rules, however, limit the price increases that may be placed on foreign imports to recovery of the increased costs of imports on dollar-for-dollar basis.

Now, this begins to answer Senator Percy's question, periodic ceiling price adjustments.

The system of ceiling prices applied to retail sales of gasoline, home heating oil and diesel fuel was established with full recognition of the fact that increased costs of imports and increased costs of domestic crude petroleum will ultimately raise the price which retailers must pay for the products which they sell to the consumer. These cost increases, which the ceiling prices prohibit being passed along immediately in the form of price increases, have the effect of squeezing retail margins. Thus, if the price which a retail gasoline dealer must pay for his gasoline goes up, and he cannot increase his prices as a consequence, his margin will necessarily fall. For this reason, the Council is explicitly committed to periodic increases in the ceiling prices. That commitment was stated in the phase IV petroleum regulations:

> The Council intends to monitor the ceiling prices of gasoline, No. 2 heating oil and No. 2–D diesel fuel and will make periodic upward adjustments in the ceiling prices for those products to account for increased costs of imports and of domestic crude.

The Council took account of the particularly acute problem facing those parts of the Nation that are heavily dependent upon higher cost imports of foreign heating oil this winter. To encourage importation of whatever quantities of foreign heating oil are needed this winter, the phase IV rules provide that retailers of home heating oil may increase their prices on the first day of each month to reflect, on a dollar for dollar basis, the increased costs of imported home heating oil incurred during the preceding month. These increases may be put into effect automatically and must be reported to the Internal Revenue Service by the fifth day of the month. This provision insures speedy recovery of whatever increased costs must be incurred to bring needed quantities of foreign heating oil to the Northeast and the upper Midwest this winter.

Now, just a concluding section or two about the current situation. On last Friday the Council issued a press statement with attached forms in which it stated that it was committed to make this periodic review, that it would like to receive certain statistical information from both heating oil and from gasoline dealers. Those forms have been widely distributed through the county. They are due in our offices next Tuesday, and we have said, and I quote:

> That we will promptly act to make appropriate upward adjustments in the ceiling prices for these products, and the advanced commitment that we will do so promptly.

Now, in conclusion, Mr. Chairman, I would like to make these remarks. The role of price control is particularly important in the present period of tight supplies for most petroleum products. American consumers are dependent upon petroleum for many of the basic necessities of modern life, gasoline, heating oil, oil for hospitals, factories, utilities and the like.

When these products are in short supply, competing users will bid up prices. Indeed, they will be willing to pay almost any price to obtain these necessities. The role of the phase IV petroleum rules is to contain these price increases which in the absence of control would escalate even more rapidly than the numbers that I gave at the outset.

Some price increases, however, are essential. We are competing with other consumers around the world for limited supply, and we must be able to pay higher prices to obtain the needed additional quantities of foreign oil. But American consumers should not be required to pay prices that are higher than necessary. Firms in the petroleum industry, large and small, must forgo price increases which they could probably obtain in an unfettered market, but which would draw forth no additional supply.

This, then, is the consumer state in phase IV petroleum rules. Consumers have a vital interest in the maintenance of a comprehensive system of controls on prices at all levels in the petroleum industry which will insure a fair return, but a return which is no higher than necessary.

Thank you, Mr. Chairman.

Chairman HUMPHREY. Thank you, Mr. Dunlop.

[The prepared statement of Mr. Dunlop follows:]

PREPARED STATEMENT OF HON. JOHN T. DUNLOP

Mr. Chairman, I am pleased to have this opportunity to discuss with you the steps taken by the Cost of Living Council to prevent inflationary price increases in the petroleum industry, while administering price controls so as to encourage the necessary increase in petroleum supplies which this country must have.

As I said in my May 11, 1973 testimony before Senate Committee Banking Housing and Urban Affairs: "The Cost of Living Council is aware that energy prices must be allowed to increase somewhat, in order to stimulate development of new energy reserves. At the same time, the Council's responsibility is to prevent significant inflationary price increases. There is a potential conflict between, (1) allowing the energy industry price flexibility to attract the capital necessary to develop energy resources and to tap higher cost sources on one hand and (2) preventing significant inflationary price increases on the other. The stabilization program rules for the oil industry have been carefully designed with these twin objectives in mind."

We realize that the task of maintaining a delicate balance between the product's supply and price is not always an easy one. However, this has been our purpose all along.

THE SUPPLY SITUATION

On the supply side, our increasing demands for foreign oil coupled with those of other countries have outstripped foreign oil-producing nations' short run capacity for increasing output. As a result, foreign oil supplies are no longer plentiful.

Oil is no longer abundant in the United States either. In fact, U.S. crude oil output is now declining annually at about a 3% rate. Both the U.S. and worldwide oil demand is increasing and oil output is not keeping pace. This has created a tight supply situation worldwide which borders on shortage.

As a consequence, foreign oil prices have skyrocketed in the last year or so. Foreign oil now generally costs more delivered to the United States than domestic oil. In fact, some foreign oil costs as much as a dollar more per barrel than the average domestic barrel of oil. In turn, this brings about corresponding price increases for gasoline, heating oil and other petroleum products which are refined from crude oil. With foreign prices higher than U.S. prices for crude oil and other petroleum products and continuing to rise, there is tremendous incentive for U.S. prices to rise to parity with world prices. In the absence of controls, this rise would eventually be so large and so rapid as to be intolerably inflationary for U.S. consumers.

Since companies must pay a higher price to import foreign petroleum products, Phase IV rules permit pass-through of these increased import costs in the form of higher prices. The rules however, limit the price increases which may be placed on foreign imports to the recovery of the increased costs of imports on a dollar-for-dollar basis.

In response to those who suggest that only major domestic refiners can afford to import high-priced foreign products, we have attached a list that is indicative of the number of Independent Oil companies who are importers of foreign products, specifically No. 2 fuel oil. This information is based on the "Interim 1973 Oil Import Allocations Announced by Interior," put out by the Office of Oil and Gas Department of Interior. Further investigation has revealed that independents imports for the first six months of 1973 have increased significantly over the first 6 months of 1972. (See Appendix A.)

THE PRICE PICTURE

Let us look at some of the numbers which indicate what has happened on the price side of the picture since the beginning of the year.

Between January and June of this year, the U.S. consumer experienced sharp increases in oil product prices. These increases reflected in part a rise in domestic crude oil prices and in part increases in sellers' profit margins. It was apparent that the increases would continue, reflecting both an inflationary domestic trends as well as the world market trend of sharply increased prices for foreign crude oil and products.

There was a substantial increase in gasoline prices as shown by the Wholesale Price Index (WPI) and the Consumer Price Index (CPI) between the end of 1972 and mid-1973. The WPI for gasoline increased by 32.2% between January to August of 1973. The CPI for gasoline increased by 7.3% from December, 1972 to July 1973. Fuel Oil (No. 2 home heating oil) increased by 37.5% in the WPI and 10.6% in the CPI in the same period. It is fair to say that some of the increases at wholesale have not yet flowed through into consumer prices for both gasoline and fuel oil.

PHASE IV REGULATIONS

Careful examination of these price increases and other relevant economic data led to the development of the final Phase IV Regulations.

Before finalizing the Phase IV regulations the Cost of Living Council asked that all interest parties submit written comments including recommended modifications and alternatives. The Council received 272 comments and met with approximately 1,500 persons representing every segment of the petroleum industry. Each comment was reviewed by our attorneys and economic analysts. An extensive reexamination was conducted to assure that the regulations were clear and consistent with the Council's basic policy decisions. These regulations, announced on August 10, 1973, incorporated those changes recommended during the consultations which would best implement the program.

The Phase IV regulations as a whole are intended to help achieve the goals of the Economic Stabilization Program—to stabilize the economy, to constrain inflation; to minimize unemployment; to improve the nation's competitive position in world trade; and to protect the purchasing power of the dollar. As a vital function in the overall Phase IV goal of managing the inflationary bulge present in the entire national economy, they are designed to delay pass-through of cost increases built up before and during the freeze and to constrain a sudden surge of consumer prices in any one period of time.

Phase IV rules establish a comprehensive system for controlling petroleum prices at all levels—from the oil that is pumped out of the ground to gasoline sold to motorists, and No. 2 heating oil sold to home owners. They also take into account international transactions, specifying the prices at which foreign products may be sold in this country. The basic provisions of the regulations are as follows:

DOMESTIC CRUDE

A two tier system has been developed to stimulate domestic crude production and supplies while maintaining price controls on oil crude ceiling presently being produced. A fixed ceiling price has been established for domestic crude petroleum. This is the May 15, 1973 posted price for crude in each U.S. oil field plus 35 cents per barrel. Producers will have the opportunity to sell "new oil"—that is, oil produced above 1972 levels plus an adjustment for the remainder of current pro-

duction—at free market prices. This "two-tier" system is designed to encourage increased investment in domestic exploration and will provide an economic incentive to allow the recovery of a larger percentage of oil in existing reservoirs.

REFINERS

After it is pumped from the ground, crude petroleum is shipped to a refinery where it is refined into an array of petroleum products. Phase IV rules require refiners to establish base prices for these products calculated on the basis of May 15, 1973 prices plus increased costs of imports and of domestic crude petroleum. The rules prohibit price increases above base prices in transactions involving these products unless the increases are cost-justified and not until the refiner files a price increase prenotification, with a 30-day waiting period, to the Cost of Living Council. During the 30-day prenotification period, the Council may issue an order disapproving, modifying, suspending or deferring a proposed price increase in whole or part. These rules permit price increases above base prices only to recover increased costs and only on a dollar-for-dollar basis. They apply to all sales by refiners to wholesalers, jobbers, others resellers and retailers of these products.

The regulations of domestic crude petroleum specify the method by which refiners include increased costs of imports in the computation of their ceiling prices for retail sales of gasoline, No. 2–D diesel fuel and No. 2 heating oil and base prices for covered products. To provide explicit guidance and to avoid misunderstandings, the Council last week amended the regulations by establishing a mathematical formula by which firms can calculate the dollar amount of the increased costs of imports and domestic crude petroleum which can be added to May 15, 1973, selling prices.

RESELLERS

Resellers purchase petroleum products from refiners or from other resellers for resale, sometimes to jobbers or wholesalers—or resellers—and sometimes to retailers. Phase IV rules limit prices charged in these transactions to the actual cost of the product plus the markup which the reseller applied to the sales he made on January 10, 1973. Retailers are considered resellers in sales involving petroleum products, other than gasoline, No. 2 home heating oil and diesel fuel. Retail sales of these three products are subject to ceiling price limitations.

RETAILERS

Retail ceiling prices for gasoline diesel fuel and No. 2 home heating oil are adjusted periodically to relieve increased cost pressures. The ceiling prices rules for gasoline allow the retailer to compute his ceiling price as his actual markup in effect on January 10, 1973 or 7 cents, whichever is higher and his cost for products on August 1, 1973. The 7 cents per gallon minimum will avert a severe hardship on those retailers who were involved in "price wars" or subject to abnormally low markups on January 10, 1973. The rule is the same for diesel fuel except there is no minimum markup. Most retail sales are subject to these rules.

Different ceiling prices rules apply to retail sales made directly by refiners because products reach the retail market through a series of intracorporate transfers rather than arms-length transactions establishing market cost and prices. Ceiling prices for these retail sales are the May 15, 1973 selling prices adjusted to reflect increased cost of imports and increased cost of domestic crude between May 15 and July 31, 1973.

HEATING OIL

To encourage importation of whatever quantities of foreign heating oil are needed this winter, the Council has allowed retailers of heating oil to adjust their ceiling prices automatically at the beginning of each month to reflct any higher costs they have paid for imported heating oil, on a dollar for dollar basis. These increases may be put into effect automatically and must be reported to the Internal Revenue Service by the fifth day of the month. Similarly retailers will be required to reduce prices to reflect reduced product costs. These sef-adjusted ceilings are intended to assure that the regulations do not restrict importation of heating oil which will be vitally needed in the United States this winter. Addi-

tional price increases will not be allowed automatically for profit or other higher costs.

Retail establishments owned and operated by refiners are likewise allowed to increase ceiling prices for retail sales of No. 2 heating oil on a monthly basis to enable them to pass-through increased costs of imported No. 2 heating oil incurred in the preceeding month.

All these regulations are to be enforced by a carefully developed monitoring system. Retailers of gasoline are required to post on each pump the ceiling price for gasoline and also the minimum octane number of the gasoline sold from that pump. Special stickers have been distributed for this purpose. These posting requirements will provide a mechanism to assure the public that retailers are complying with stabilization regulations.

SMALL BUSINESS EXEMPTION

As a result of the pricing interdepnednce in the industry, the Council found it necessary to require controls in all of its various segments, not just the largest firms with $250 million or more in annual revenues or sales. Hence the Small Business Exemption does not apply to those products which are subject to the Petroleum Regulations. The Council has followed a comparable policy in some other industries such as construction, and non-institutional providers of health.

EXCEPTIONS

The Council realizes that these regulations will not accommodate the entire industry and that certain cases will have to be reviewed and adjusted by the Cost of Living Council where hardships or gross inequities exist. In such situations, firms may file for an exception at their Local IRS District Office.

Exception applications may be submitted to the 28 key district Internal Revenue Service offices around the country and IRS personnel have been instructed to provide special assistance in preparing applications to small businessmen who do not have the elaborate recordkeeping and accounting capabilities of larger firms.

The establishment of special rules to govern the petroleum industry during Phase IV is an essential element of the Cost of Living Council program to stabilize prices in this country. The rules governing the petroleum industry must be viewed in the larger context of the overall regulatory scheme. The rules must also be considered within the framework of the total energy crisis in America. Our policies are aimed at moderating the current inflationary pressures of the oil industry on the economy, while insuring that the American fuel production capacity continues to expand to meet our growing needs. It is a narrow tightrope we must walk, but it is necessary for the success of Phase IV and, in turn, the Economic Stabilization Program as a whole.

RECENT ACTIONS

From the outset, the Council has recognized that this careful balance would require periodic price adjustments. Under our regulations, some price adjustments are allowed to take place automatically, while other adjustments require Cost of Living Council action. The latter is especially true with regard to ceilings on domestic crude petroleum prices and retail ceiling prices of gasoline, home heating oil and diesel fuel. With partial exception in the case of home heating oil, only the Council can adjust these ceilings, and as the Council stated on August 7, 1973, when the Phase IV petroleum regulations were published: "The Council intends to monitor the ceiling prices of gasoline, No. 2 heating oil and No. 2-D diesel fuel and will make periodic upward adjustments in the ceiling prices for those products to account for increased costs of imports and of domestic crude."

In accordance with this commitment, the Council last Friday called upon the nation's retail gasoline, diesel fuel and home heating oil dealers to provide the Council further information on their prices and costs of gasoline, diesel fuel and home heating oil. We have asked that this data be submitted to the Council's Energy Division by next Tuesday, September 25.

This additional price information will expand the Council's existing data base and will help guide the Council's review of current ceiling price levels. We expect this information to be a valuable supplement to the data already in the Council's files and data the Council is presently gathering independently as part of its petroleum industry monitoring system.

After reviewing this information, the Council will act promptly to make appropriate upward adjustments in the ceiling prices for these products. During this review period, however, current ceiling prices remain in effect.

Because time is short, the Council has taken steps to assist retailers in providing data. We have issued special forms, one for gasoline and diesel fuel, and the other for home heating oil, to make it easier for retailers to respond to the Council's request for information. We have asked that retailers provide specific ceiling price, product cost and margin information on the forms. We are asking only for the minimum data necessary for us to complete our review.

To be certain major heating oil importers are aware of the intent of the Council's regulations and fully understand the technicalities of those rules, the Council is conducting a series of meetings with importers this week to review amended regulations. It is essential that importers fully understand that Cost of Living Council rules in no way deter the importation of vital heating oil supplies for this winter.

APPENDIX A

Independent Deep Water Terminal Imports of No. 2 Fuel Oil

Company name:

Belcher Oil Company
Central Petroleum Corporation
Cirillo Brothers Oil Company
Colonial Oil Company
Colonial Oil Industries, Inc.
Commonwealth Oil Refining Company
Deepwater Oil Terminals, Inc.
Fort Neck Oil Terminals, Inc.
Gibbs Oil Company
Hall, George, Corporation
Howard Coal & Coke Company, Inc.
Meenan Oil Company
Northeast Petroleum Indus.
Northville Industries
Patchogue Oil Terminals
Patterson Fuel Oil Company, Inc.
Pittston Company
Remington Oil (Burns Bros.)
Sears Oil Company, Inc.
Signal Companies
Southern States Cooperative
Union Petroleum Corporation
Webber Tanks Inc.
Wellan Oil Inc.
Wyatt Inc.

APPENDIX B

[For immediate release, Wednesday, Sept. 19, 1973]

The attached "talking paper" entitled Price Behavior and Price Control in the Petroleum Industry was presented to the members of the Cost of Living Council by Council Director John T. Dunlop at their Thursday meeting, September 13. It is furnished for your information and use.

Price Behavior and Price Control in the Petroleum Industry

The petroleum industry is one of the largest industries with annual sales of crude petroleum and petroleum products in this country amounting to more than 80 billion dollars.

As one of the nation's fundamental resources, production of petroleum affects directly or indirectly almost all sectors of the economy. Ninety-nine percent of all transportation uses petroleum products. The petro-chemical industry, which produces plastics, solvents, and aeromatic chemicals, is totally dependent on petroleum. Petroleum is the second major source of industrial energy and the third major generator of electricity.

Daily, we use 18 million barrels of petroleum products in the various facets of our lives, our homes, cars, industry and utilities. Currently, we produce domestically about 9 million barrels of crude oil and another 2.2 million barrels of petroleum refined from natural gas. The remainder of our needs is fulfilled from the imports of both crude oil and products.

RECENT PRICE BEHAVIOR IN PETROLEUM INDUSTRY

In recent years the United States has become more and more reliant on imports to satisfy the nation's rapidly expanding demand for oil products. Foreign oil supplies have been plentiful and inexpensive relative to domestic prices for both crude oil and petroleum products. Foreign sources, therefore, have been attractive sources of supplies; so attractive that for almost 14 years (until this year) the United States has operated a mandatory oil imports program which limited

the amount of low cost foreign oil that could be imported. This policy was designed to assure continued production and exploration in this country.

However, our increasing demands for foreign oil, coupled with the even more rapidly increasing demands of other countries, have outstripped the foreign oil-producing nations short run capability of increasing output sufficient to meet current levels of world demand. As a result foreign oil supplies are no longer available, except at substantially higher prices.

Oil is no longer plentiful in the United States either. In fact, our output is now declining annually at about a 3% rate. Thus, while both the United States and worldwide oil demand is increasing, oil output is not keeping pace. This has created a tight supply situation worldwide which borders on a shortage.

As a consequence, foreign oil prices have skyrocketed in the last year or so. For the first time, foreign oil generally costs more when delivered to the United States than domestic oil. In fact, some foreign crude oil costs as much as a dollar more per barrel than the average domestic barrel of oil. In turn, this brings about price increases for gasoline, heating oil and other petroleum products which are refined from crude oil. With foreign prices higher than U.S. prices for crude oil (and products) and continuing to rise, there is tremendous pressure for U.S. prices to rise to parity with world prices. (See chart I.)

Between January and June of this year, the U.S. consumer experienced sharp increases in oil product prices. These increases reflected in part a rise in domestic crude oil prices and in part increases in industry profit margins. It was apparent that the increases would continue, reflecting both a domestic inflationary trend as well as the world market trend of sharply increased prices for foreign crude oil and products.

There was a dramatic increase in gasoline prices as shown by the Wholesale Price Index (WPI) and the Consumer Price Index (CPI) between the end of 1972 and mid-1973. The WPI for gasoline increased by 33.2% between January and August of 1973. The CPI for gasoline increased by 7.3% from December 1972 to July 1973. (See chart II.) Fuel oil (No. 2 home heating oil) increased by 37.5% in the WPI and 10.6% in the CPI in the same periods. (See chart III.) The increases in the WPI for both gasoline and heating oil have yet to be fully reflected in the CPI.

THE PHASE IV PETROLEUM RULES

Prior to the issuance of the final petroleum regulations, proposed rules were issued on July 19, 1973, for public comment. The Council received and reviewed 261 comments from all branches of the industry, including major oil companies, refiners, wholesalers and retailers. A number of conferences were also held with interested parties before the final regulations were published on August 17, 1973.

Phase IV rules establish a comprehensive system for controlling petroleum prices at all levels—from the oil that is pumped out of the ground to gasoline sold to motorists, or No. 2 heating oil sold to home owners. Phase IV price controls also take into account international transactions, controlling the pass-through increases in prices at which foreign products may be sold in this country.

DOMESTIC CRUDE OIL

Special rules apply to domestically produced petroleum. A fixed ceiling price has been established for domestic crude petroleum pumped from oil fields in the United States. This ceiling price is the May 15, 1973, posted price for crude in each U.S. oil field plus 35 cents per barrel. Depending upon the grade and quality of the crude oil, this ceiling price is about $1.00 below the world price.

Since current levels of domestic crude production are insufficient to meet demand, Phase IV rules create an incentive to encourage production of additional quantities of domestic crude petroleum. This incentive program operates by releasing from the ceiling prices so-called "new oil"—i.e., oil produced above last year levels—plus an adjustment for the remainder of current production. This additional production (the new oil) is not covered by the price ceiling and may rise to market levels. This is generally characterized as a 2-tier pricing system for domestic crude.

REFINERS

After it is pumped from the ground, crude petroleum is shipped to a refiner where it is refined into an array of petroleum products—gasoline, heating oil, diesel fuel, lubricants, solvents, and many other products. Phase IV rules require refiners to establish base prices for these products calculated on the basis of

May 15, 1973 prices plus increased costs of imports and of domestic crude petroleum. The rules prohibit price increases above base prices in transactions involving these products unless the increases are cost-justified and until the refiner files a price increase prenotification, with a 30-day waiting period, to the Cost of Living Council. These rules are similar to the Phase IV rules covering the industrial sector of the economy by permitting price increases above base prices only to recover increased costs and only on a dollar-for-dollar basis. They apply to all sales by refiners to wholesalers, jobbers, and other resellers of these products.

Resellers purchase petroleum products from refiners or from other resellers and resell them, sometimes to jobbers or wholesalers—other resellers—and sometimes to retailers, the people who sell the products to consumers. Phase IV rules limit prices charged in these transactions to the actual cost of the product plus the markup which the reseller applied to the sales he made on January 10, 1973.

RETAILERS

Phase IV rules establish ceiling prices at retail for sales of gasoline, heating oil and diesel fuel. For gasoline and home heating oil, the ceiling prices are the dealer's cost for products on August 1, 1973, plus his January 10, 1973 dollar and cent markup with a minimum markup of 7 cents per gallon. The rule is the same for diesel fuel, but with no minimum markup. For other petroleum products, prices may not exceed the actual cost of the product plus the actual dollar and cent markup applied by the retailer in sales on January 10, 1973.

Different ceiling price rules apply to retail sales made directly by refiners because products reach the retail market through a series of intra-corporate transfers, rather than arms-length transactions establishing market cost and prices. Ceiling prices for these retail sales are the May 15, 1973 selling prices, adjusted to reflect increased cost of imports and increased cost of domestic crude between May 15 and July 13, 1973. Under the rules, gasoline dealers must post their ceiling prices and the minimum octane ratings for each grade of gasoline on each gasoline pump.

IMPORTS

Phase IV price controls also reflect the reality that the United States is becoming increasingly dependent upon imported foreign petroleum. World prices for foreign oil are far in excess of U.S. prices and consumers in other countries are bidding for foreign oil just as we are. Consequently, since companies must pay a higher price to import foreign petroleum products, Phase IV rules permit pass-through of these increased import costs in the form of higher prices. The rules, however, limit the price increases that may be placed on foreign imports to recovery of the increased costs of imports on dollar-for-dollar basis.

PERIODIC CEILING PRICE ADJUSTMENTS

The system of ceiling prices applied to retail sales of gasoline, home heating oil and diesel fuel was established with full recognition of the fact that increased costs of imports and increased costs of domestic crude petroleum will ultimately raise the price which retailers must pay for the products which they sell to the consumer. These cost increases, which the ceiling prices prohibit being passed along immediately in the form of price increases, have the effect of squeezing retail margins. Thus, if the price which a retail gasoline dealer must pay for his gasoline goes up, and he cannot increase his prices as a consequence, his margin will necessarily fall. For this reason, the Council is explicitly committed to periodic increases in the ceiling prices. That commitment was stated in the Phase IV petroleum regulations, "the Council intends to monitor the ceiling prices of gasoline, No. 2 heating oil and No. 2—D diesel fuel and will make periodic upward adjustments in the ceiling prices for those products to account for increased costs of imports and of domestic crude."

The Council took account of the particularly acute problem facing those parts of the nation that are heavily dependent upon higher cost imports of foreign heating oil this winter. To encourage importation of whatever quantities of foreign heating oil are needed this winter, the Phase IV rules provide that retailers of home heating oil may increase their prices on the first day of each month to reflect, on a dollar-for-dollar basis, the increased costs of imported home heating oil incurred during the preceding month. These increases may be

put into effect automatically and must be reported to the Internal Revenue Service by the fifth day of the month. This provision ensures speedy recovery of whatever increased costs must be incurred to bring needed quantities of foreign heating oil to the Northeast and the upper Mid-West this winter.

RETAIL MARKUPS

The Council gathered extensive dealer markup data as the basis for its decision to establish ceiling prices at retail for the sale of gasoline. It is important to emphasize, in this connection, that while the margins themselves deal in pennies per gallon, their aggregate impact upon the economy is substantial. It is estimated that approximately 100 billion gallons of gasoline will be sold at retail in 1973. Thus, an increase in margin which is reflected in a price increase of a penny per gallon represents, in the aggregate, a price increase of $1 billion which must be paid by American motorists.

Information collected by the Council showed that gross margins for retail sales of gasoline during 1972 averaged 6.74 cents per gallon. During the Spring of 1973, however, retail gasoline dealer margins increased significantly. According to industry data, the average margin for retail gasoline dealers in 55 representative U.S. cities increased to 7.60¢ per gallon by July 1973, an increase of 13%. The survey noted disparity from city to city. In Los Angeles, for example, the average actual dealer margin for the total of all outlets surveyed on January 7, 1973 was 6.86 cents per gallon, with a manufacturers suggested retail dealer margin of 7.56 cents. On that date, 53% of the outlets had margins at the suggested margin, 3% were above that figure and 43.9% below that figure. By contrast, on July 22, 1973 the average actual dealer margin was 8.20 cents per gallon while the suggested margin had increased much less, to 7.60 cents per gallon. On that date, 26.3% of the outlets had margins at the suggested margin, 57.2% were above that figure and 16.5% below that figure. Note that while the average suggested margin had increased .04 cents per gallon, the average actual margin had increased 1.34 cents per gallon or 19.5%.

During the comment period on the proposed Phase IV rules, the Council solicited and received margin information from a number of regional gasoline dealers associations. The Virginia Gasoline Retailers Association advised the Council that their average margin on January 10, 1973 was 6.672 cents per gallon, on May 15, 1973 it was 7.133 cents per gallon and on June 1–8, 1973 it was 7.377 cents per gallon. Similarly, the Southwestern Ohio Gasoline Dealers Association advised the Council that their average margin on January 10, 1973 was 6.226 cents per gallon, on May 15, 1973 it was 6.969 cents per gallon and on June 1–8, 1973 it was 7.249 cents per gallon.

The very clear conclusion to be derived from this and other data is that during the period of the feared gasoline shortage this spring, retail gasoline dealers substantially hiked their prices and obtained significantly increased markups. These markups were on the average far above what dealers had previously obtained and were, in the Council's view, inflationary. The Council determined to reduce these markups to the levels which they occupied on January 10, 1973, the last day of Phase II of the Economic Stabilization Program. At the same time, the Council took note of the fact that in some areas price wars were being waged in January with the result that dealer markups were depressed on January 10. Consequently, it established a minimum markup of 7 cents per gallon which is above the *average* markup which retailers were able to apply in all of 1972. The Council, therefore, established ceiling prices for most gasoline retailers based upon costs as of August 1, 1973 and markups as of January 10, 1973 with a 7 cents minimum markup.

REFINER-OWNED AND -OPERATED RETAIL OUTLETS

About 90% of the retail service stations in the United States are owned or leased by independent businessmen who purchase and resell the major brands of gasoline to American motorists. However, about 10% of the service stations are directly owned and operated by refiners. Ceiling prices at these outlets are based upon the May 15 selling price at the pump, plus adjustments for increased costs of imports and domestic crude in accordance with formulas established in the Phase IV rules. In contrast to the price behavior of most other service stations, the Council found that prices charged at refiner-owned and -operated retail outlets remained steady for most of the two years prior to May 15, 1973. For these refiner-retailers, fixing the ceiling at May 15 prices, plus adjustments for

increased costs of imports and of domestic crude petroleum, locked their prices in place at essentially the levels they have occupied for many months. Moreover, the choice of the May 15, 1973 date is consistent with the Phase IV pricing rules established for other aspects of the operations conducted by refiners.

APPLICATION TO SMALL BUSINESSES

The rise in gasoline prices charged American consumers led the Council to include all retail service station sales of gasoline under the Phase IV petroleum price rules, despite the fact that many service stations are very small firms which would otherwise qualify for an exemption from controls under the small business exemption. The Council intends to regulate only the sale of petroleum products covered by these rules. Sales of other products are exempt if the service station otherwise qualifies for the small firm exemption. The rationale for this decision lies in the fact that since the large majority of retail gasoline dealerships employ fewer than 60 persons, application of the exemption in the petroleum sector would, in effect, exempt the entire retail gasoline sector. The Council has adopted the same policy in other industries where economic units are typically smaller than 60 employees. Since inception, that exemption has not applied to the health services industry or to firms in the construction industry. Similarly, in May 1973, the Council withdrew the small business exemption from the lumber industry and in March 1973, it revoked the small business exemption for firms with fewer than 60 employees selling meat products. There is ample historic precedent for not applying the small business exemption in the petroleum industry.

At the same time, the Council recognized that application of the ceiling price rules, particularly to some of the smaller dealers, even with a minimum 7 cent per gallon margin, would create some cases of hardship. This is inevitably the case in any price control system. Consequently, the Council has established an exceptions process to afford relief from the rules in cases of severe hardship or gross inequity. Exception applications may be submitted to the 28 key district Internal Revenue Service offices around the country and IRS personnel have been instructed to provide special assistance in preparing applications to small businessmen who do not have the elaborate recordkeeping and accounting capabilities of larger firms.

THE CONSUMER'S STAKE IN PHASE IV PETROLEUM RULES

The United States is facing an indefinite period of escalating prices for petroleum products. Demand is increasing at the rate of 6.4% per year, domestic production is continuing to fall at the rate of about 3% per year and prices of foreign petroleum, which we must purchase to meet our demands, is rising rapidly. Prices will thus continue to increase and no price control program can reverse the trend. The purpose of the Phase IV petroleum rules is to retard this upward movement in prices and to ensure that no unnecessary price increases are passed on to American consumers.

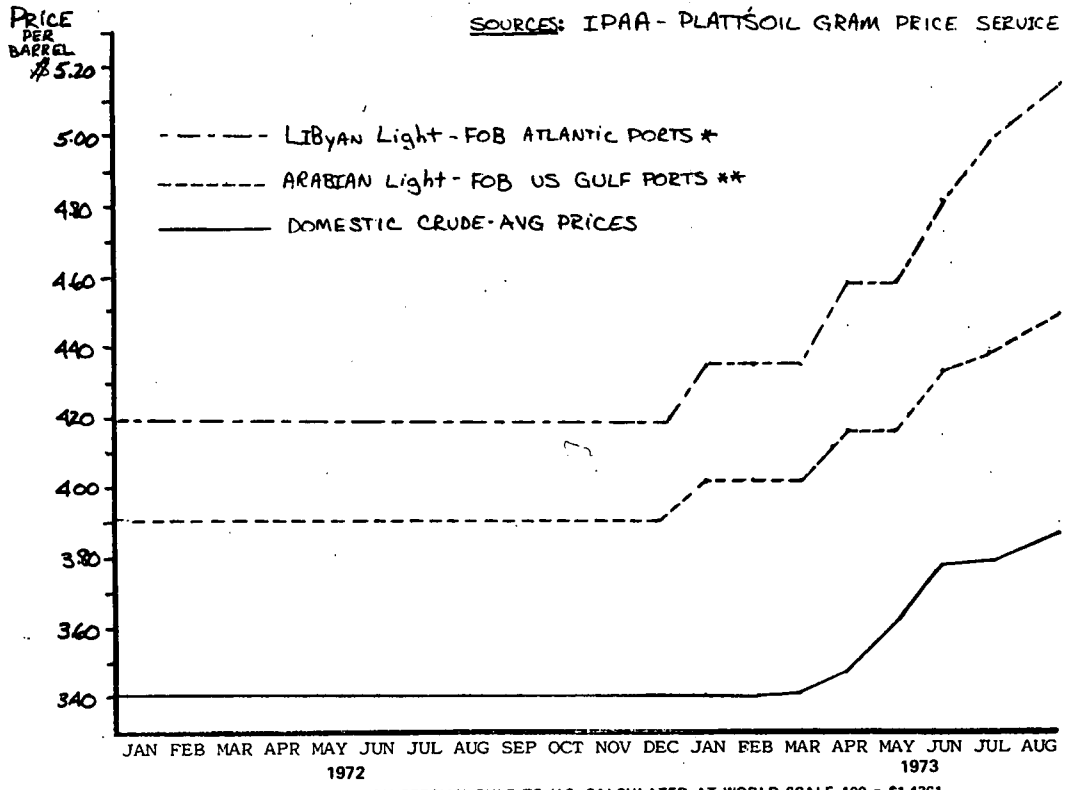
The role of price controls is particularly important in the present period of tight supplies for most petroleum products. American consumers are dependent upon petroleum for many of the basic necessities of modern life—gasoline for their automobiles, heating oil for their homes, oil for hospitals, factories and utilities, diesel fuel for truck and rail transportation. When these products are in short supply, competing users will bid up prices—indeed they will be willing to pay almost any price to obtain these necessities. The role of the Phase IV petroleum rules is to contain these price increases which, in the absence of controls, would escalate even more rapidly.

Some price increases are essential; we are competing with other consumers around the world for limited supplies, and we must be able to pay higher prices to obtain needed additional quantities of foreign imports. But American consumers should not be required to pay prices that are higher than necessary. Firms in the petroleum industry—large and small—must forego price increases which they could probably obtain in an unfettered market but which would draw forth no additional supply.

This, then, is the consumer's stake in Phase IV petroleum rules. Consumers have a vital interest in the maintenance of a comprehensive system of controls on prices at all levels of the petroleum industry which will encure a fair return but which is no higher than necessary.

CHART I

COMPARISON OF PRICES BETWEEN DOMESTIC
CRUDE PETROLEUM AND REPRESENTATIVE IMPORTED CRUDE



* INCLUDES TRANSPORTATION FROM PERSIAN GULF TO U.S. CALCULATED AT WORLD SCALE 100 = $1.4361
** INCLUDES TRANSPORTATION FROM MEDITERRANEAN TO U.S. NORTH OF HATTERAS AT WORLD SCALE 100 = $0.57

CHART II

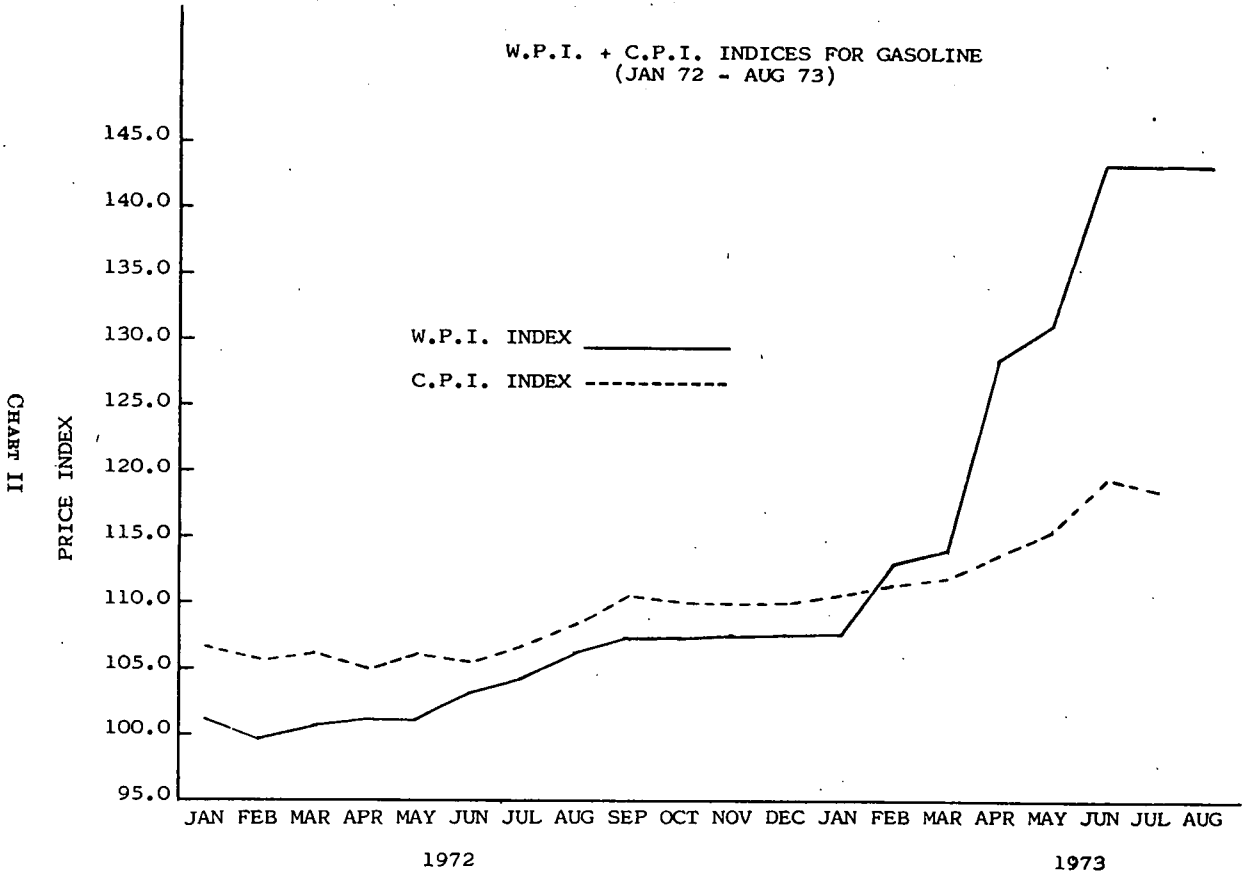
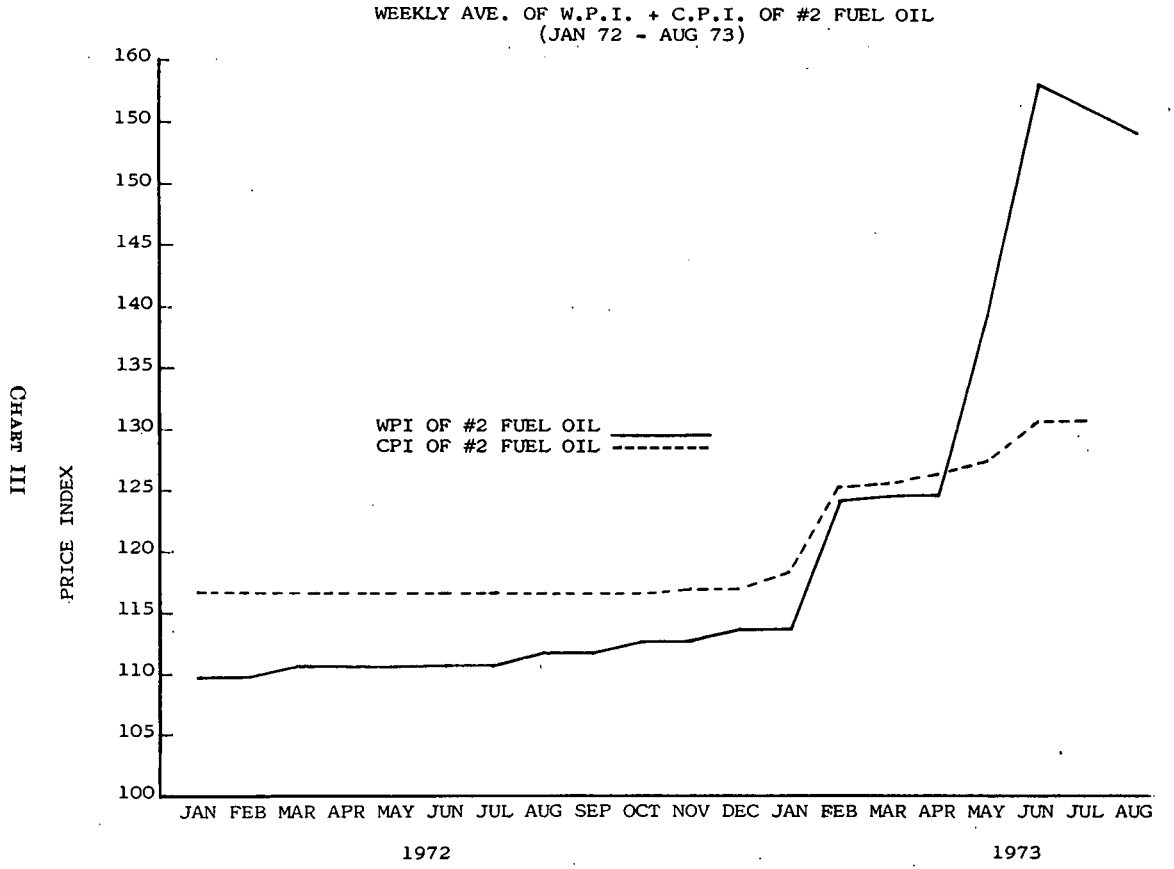

W.P.I. + C.P.I. INDICES FOR GASOLINE
(JAN 72 - AUG 73)
PRICE INDEX
145.0
140.0
135.0
130.0
125.0
120.0
115.0
110.0
105.0
100.0
95.0
W.P.I. INDEX
C.P.I. INDEX
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
1972
1973

CHART III


WEEKLY AVE. OF W.P.I. + C.P.I. OF #2 FUEL OIL
(JAN 72 - AUG 73)
PRICE INDEX
160
150
150
145
140
135
130
125
120
115
110
105
100
WPI OF #2 FUEL OIL
CPI OF #2 FUEL OIL
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
1972
1973

[For immediate release, Friday, Sept. 14, 1973]

The Cost of Living Council today called upon the nation's retail gasoline dealers and home heating oil dealers to submit to the Council by September 25, 1973, further information on their prices and costs of gasoline, diesel fuel and home heating oil.

Dr. John T. Dunlop, Director of the Cost of Living Council, said: "We are asking the nation's retailers of gasoline and home heating oil to furnish factual information to assist the Council in reviewing current ceiling price levels. This information will supplement data already in the Council's files and data the Council is gathering independently as part of its petroleum industry monitoring system. After reviewing this information, the Council will act promptly to make appropriate upward adjustments in the ceiling prices for these products. During this review period, however, current ceiling prices remain in effect."

This step is taken in implementation of the Council's commitment, announced on August 7, 1973, when the Phase IV petroleum regulations were published, "to monitor the ceiling prices of gasoline, No. 2 heating oil and No. 2-D diesel fuel and make periodic upward adjustments in the ceiling prices for those products to account for increased costs of imports and of domestic crude."

The Council announced that it was issuing forms on which retail dealers are being asked to submit detailed price, cost, and margin information. Separate forms are being issued for gasoline dealers and for home heating oil dealers. The Council also stated that it had asked existing national, regional and state industry organizations for assistance in gathering information on the experience of individual retail firms.

To assure earliest possible review, the Council asked that the information be submitted to the Energy Division, Cost of Living Council, Retail Outlet Survey, P. O. Box 19188, Washington, D.C. 20036.

In a related action, the Council announced that it had completed its review of cost and price information submitted to it by the Atlantic Richfield Company (ARCO). ARCO suspended a previously announced price increase on gasoline and home heating oil on September 7, 1973, at the Council's request. Officials of the company met with Cost of Living Council personnel this week to review those price increases.

The Council stated that ARCO had computed its cost justification in accordance with amended regulations issued this week by the Council and had reduced the previously announced price increase for home heating oil from 2 cents per gallon to 1 cent per gallon as a result of recomputations.

The Council said ARCO would be permitted to place into effect the reduced price increases for home heating oil and the previously announced 1 cent per gallon price increase for gasoline beginning Monday, September 17, 1973.

In a separate action the Council announced that it will hold a series of meetings with major heating oil importers next week to review the Council's amended regulations for computing increased costs of imports. The Council stated that it was requesting the meetings to be sure that the companies fully understand the technicalities of the Council's rules which allow for pass through of imports and to ensure that the rules do not deter in anyway needed imports of No. 2 heating oil.

The Council also issued a statement emphasizing that action by some retail gasoline stations in charging separate prices to customers for services which were previously offered free of charge is not in compliance with Phase IV regulations. A Council spokesman stated that some service stations have imposed service charges for pumping gasoline, washing windshields, checking oil and similar activities. The spokesman stated: "Services which have traditionally been provided without extra charge may not now be separately priced. The Internal Revenue Service has been alerted to this practice and will take action against non-complying firms. Members of the public are encouraged to report any apparent violation to their local IRS office."

COST OF LIVING COUNCIL,
Washington, D.C.

Specific Instructions for Completion of No. 2 Heating Oil Survey

PART I—IDENTIFICATION DATA

Item 1

Leave Blank

Item 2. Date of Survey

Enter the date this form is completed.

Item 3. Type of Outlet

Indicate by placing a check mark in the appropriate box.

Item 4. Name of Outlet

Enter the name of the outlet (not just the brand name).

Item 5. Address

Enter the address of the outlet to which this form applies.

Item 6. Brand Name

Enter the brand name applicable to the product being sold at this outlet.

Item 7. Ownership Characteristics

Indicate, by placing a check mark in the appropriate box, the ownership characteristics of the outlet to which this form applies.

PART II—PRICE INFORMATION

For purposes of the completion of this survey, the following definitions are applicable:

"Wholesale Sale" means those sales which are transacted with respect to a class of purchasers not considered to be included within the categories listed as (a) institutional and/or Industrial sales or (b) Retail: Sales for residential use. The term does not apply to those sales transacted with respect to a class or classes of purchasers, who have not otherwise been considered to be a wholesale purchaser as a result of the historical definition of such a class as has been employed by this particular outlet. As a general rule, wholsesale sales should apply to transactions involving bulk shipments, lower unit sales prices, and relatively large dollar amounts when compared to those applicable to sales for residential use.

"Institutional and/or Industrial Sales" means those sales transactions applicable to specific classes of purchaser who are not included for purposes of this survey, to be within the categories listed as (a) Wholesale Sales, or (b) Retail: Sales for residential use. Sales to hospitals, factories, large apartment buildings, public utilities, etc., are considered to be of the general variety which are to be included within this category.

"Retail: Sales for residential use" means those sales transactions made relative to a specific class (or classes) of purchasers not otherwise included within the aforementioned definitions and apply to the sale of No. 2 heating oil for the heating of residential homes.

"No. 2 Heating Oil" means distillate burner fuel as defined in ASTM D 396, Grade No. 2.

The method of caculating the data required with respect to each of the categories defined, above, is identical. Consequently, the following instructions shall be applicable to each:

Items (1) through (6)

These are the dates which have been selected for the measurement of various data requested. With regard to (6), write in the survey completion date; this must be the date to which the information provided in columns (b) through (f) applies.

Column (a). Dates

Explained above.

Column (b). Gross Selling Price

Enter in this column with respect to the dates listed in column (a), the gross selling price of one unit (U.S. Gallon) of No. 2 heating oil determined on a weighted average basis if appropriate (it is appropriate in the event that more

than one selling price existed with respect to the particular level of distribution and date). This price is arrived at by dividing the total sales revenue by the total units (gallons) sold relative to the dates listed in column (a).

Column (c). Less All Taxes

Enter in this column, all taxes applicable to the sale of one gallon of the product listed in column (a). This includes excise taxes and any other type of tax which may have been levied with respect to sales transacted during the dates specified. Where taxes vary directly with price, it will be necessary to determine the appropriate amount to include in this column, by dividing the total taxes paid as a result of the sales reflected in column (b) by the total units (gallons) sold applicable the date specified in column (a).

Column (d). Adjusted Selling Price

Enter in this column the result obtained by subtracting the figures in column (c) from those listed in column (b) with respect to the various dates shown in column (a).

Column (e) Less: Net Purchase Price

Enter in this column the price paid with respect to one unit (gallon) of No. 2 heating oil, purchased (received) on the date shown in column (a). If No. 2 heating oil was not received on the dates specified in column (a), then the date for purposes of determining net purchase price is the nearest preceding date on which No. 2 heating oil was received. A weighted average calculation is necessary only in the event that more than one receipt of No. 2 heating oil was accomplished with respect to the date shown in column (a).

Column (f). Gross Margin

Enter in this column the result obtained by subtracting the figures in column (e) from those listed in column (d) with respect to the various dates shown in column (a).

PART III—CERTIFICATION

This is a two-part certification. The first part applies to the individual responsible for the completion of the survey and the second part refers to the fact that a certified public accountant, or a public accountant, must certify with respect to the information provided. Both individuals must sign the survey above their typed names.

ECONOMIC STABILIZATION PROGRAM

NO. 2 HEATING OIL SURVEY

Part I—Identification Data

1. Identification Number (To be filled in by C.O.L.C.)

2. Date of Survey Month Day Year

3. Type of Outlet: (Check One)
☐ Major Brand
☐ Independent Brand

4. Name of Outlet

5. Address:
Street
City State Zip Code

6. Brand Name

7. Ownership Characteristics: (Check One)
☐ Branded Jobber
☐ Unbranded Jobber
☐ Rack Buyer
☐ Spot Market Buyer
☐ Refiner
☐ Importer

Part II—Price Information (Provide the requested information with respect to each of the dates listed)

1 Wholesale Sales

Dates	All Prices Expressed in Dollars and Cents				
	Gross Selling Price	Less All Taxes	Adjusted Selling Price (Col. b — Col. c)	Less Net Purchase Price	Gross Margin (Col. d — Col. e)
a	b	c	d	e	f
(1) January 10, 1973					
(2) May 15, 1973					
(3) June 1, 1973					
(4) August 1, 1973					
(5) September 1, 1973					
(6) Date Survey completed: September ___, 1973					

2 Institutional and/or Industrial Sales

Dates	All Prices Expressed in Dollars and Cents				
	Gross Selling Price	Less All Taxes	Adjusted Selling Price (Col. b — Col. c)	Less Net Purchase Price	Gross Margin (Col. d — Col. e)
a	b	c	d	e	f
(1) January 10, 1973					
(2) May 15, 1973					
(3) June 1, 1973					
(4) August 1, 1973					
(5) September 1, 1973					
(6) Date Survey completed: September ___, 1973					

3 Retail: Sales for Residential Use

Dates	All Prices Expressed in Dollars and Cents				
	Gross Selling Price	Less All Taxes	Adjusted Selling Price (Col. b — Col. c)	Less Net Purchase Price	Gross Margin (Col. d — Col. e)
a	b	c	d	e	f
(1) January 10, 1973					
(2) May 15, 1973					
(3) June 1, 1973					
(4) August 1, 1973					
(5) September 1, 1973					
(6) Date Survey completed: September ___, 1973					

Part III—Certification

I hereby certify that the above information is true and accurate.

Typed name and signature | Relationship to Dealer

Position | Telephone No.

Certified Public Accountant or Public Accountant

Typed name and signature

Address

Mail to: Energy Division, Cost of Living Council Retail Outlet Survey (#2); P.O. Box 19188 Washington, D.C. 20036

COST OF LIVING COUNCIL,
Washington, D.C.

SPECIFIC INSTRUCTIONS FOR COMPLETION OF RETAIL GASOLINE AND DIESEL SURVEY

PART I—IDENTIFICATION DATA

Item 1

Leave blank.

Item 2. Date of Survey

Enter the date this form is completed.

Item 3. Type or Retail Outlet

Indicate by placing a check mark in the appropriate box, the type of station to which this form applies.

Item 4. Name of Retail Outlet

Enter the name of the outlet (not just the brand name).

Item 5. Address

Enter the address of the retail outlet to which this form applies.

Item 6. Brand Name

Enter the brand name applicable to the product being sold at this retail outlet.

Item 7. Ownership Characteristics

Indicate, by placing a check mark in the appropriate box, the ownership characteristics of the retail outlet to which this form applies.

PART II—PRODUCT INFORMATION

For items 1 through 6 the method of calculating the required data is generally consistent. Consequently, the following instruction shall be applicable to each of the six periods of measurements:

Item 1. Premium Gasoline

Is considered to be that particular grade (recognizing that there may be a certain permissible octane range applicable to the classification of "premium gasoline" and not a specific octane number) of gasoline which has customarily been sold as premium grade relative to this retail outlet.

Item 2. Regular Gasoline

Is considered to be that particular grade (recognizing that there may be a certain octane range applicable to the classification of "regular gasoline" and not a specific octane number) of gasoline which has customarily been sold as regular grade relative to this retail outlet.

Item 3. Low Lead Gasoline

Is considered to be that particular grade (recognizing that there may be a certain permissible range within which one may consider a given grade of gasoline as being low lead) of gasoline which has customarily been sold as low lead gasoline relative to this retail outlet.

Item 4. Diesel Fuel

The particular type of diesel fuel to which this form applies, is that type suitable for use in high speed engines with relatively uniform speeds and highloads.

Within this classification would be the grade of diesel fuel used by various types of (1) farm equipment and (2) other motor vehicles.

Column (a). Type of Product

Explained above.

Column (b). Gross Selling Price

Enter in this column, with respect to the various products listed in column (a) the pump price applicable to the sale of one gallon of the product listed in column (a). This selling price should normally be the price posted (or listed) at the pump. It should be the price which was charged to the standard variety of retail customer on the date specified.

Column (c). Less All Taxes

Enter in this column, all taxes applicable to the sale of one gallon of the product listed in column (a). This includes, excise taxes and any other type of tax which may have been levied with respect to sales transacted during the dates specified.

Column (d). Adjusted Selling Price

Enter in this column the result obtained by subtracting the figures in column (e) from those listed in column (b) with respect to the various products shown in column (a).

Column (e). Less: Net Purchase Price

Enter in this column the price paid with respect to one gallon of each of the various products listed in column (a). This price must be exclusive of all taxes but include any charges that may be applicable to the transportation of the product from the supplier to this particular retail outlet.

Column (f). Gross Margin

Enter in this column the result obtained by subtracting the figures in column (e) from those listed in column (d) with respect to the various products shown in column (a).

Column (g). Octane Number

For purposes of this survey, octane number means the number obtained by the process referred to in the Phase IV Posting Requirements for Gasoline and No. 2–D Diesel Fuel and is generally described as the octane number derived from the sums of research (R) and motor (M) octane numbers divided by two.

Column (h). Posted Ceiling Price

This column is applicable with respect to the completion of only one of the periods of measurement—6. Current Prices And Purchase Costs. Prices shown in this column are to be taken directly from the authorized stickers which have been completed in accordance with the instruction contained in the Phase IV Posting Requirements for Gasoline and No. 2–D Diesel Fuel.

PART III—CERTIFICATION

This is a two-part certification. The first part applies to the individual responsible for the completion of the survey and the second part refers to the fact that a certified public accountant, or a public accountant, must certify with respect to the information provided. Both individuals must sign the survey above their typed names.

4. August 1, 1973

Type of Product (a)	All prices expressed in cents per gallon					
	Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (Col. b — Col. c) (d)	Less Net Purchase Price (e)	Gross Margin (Col. d — Col. e) (f)	Octane Number (g)
(1) Premium Gasoline						
(2) Regular Gasoline						
(3) Low Lead Gasoline						
(4) Diesel Fuel						

5. September 1, 1973

Type of Product (a)	All prices expressed in cents per gallon					
	Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (Col. b — Col. c) (d)	Less Net Purchase Price (e)	Gross Margin (Col. d — Col. e) (f)	Octane Number (g)
(1) Premium Gasoline						
(2) Regular Gasoline						
(3) Low Lead Gasoline						
(4) Diesel Fuel						

6. Current Prices and Purchase Costs (Date of Survey)

Type of Product (a)	All prices expressed in cents per gallon						
	Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (d)	Less Net Purchase Price (e)	Gross Margin (f)	Octane Number (g)	Posted Ceiling Price (h)
(1) Premium Gasoline							
(2) Regular Gasoline							
(3) Low Lead Gasoline							
(4) Diesel Fuel							

Part III—Certification

I hereby certify that the above information is true and accurate.

Typed name and signature — Relationship to Dealer

Position — Telephone No.

Certified Public Accountant or Public Accountant

Typed name and signature

Address

Mail to: Energy Division, Cost of Living Council, Retail Outlet Survey, P.O. Box 19188, Washington, D.C. 20036

ECONOMIC STABILIZATION PROGRAM

RETAIL GASOLINE AND DIESEL FUEL SURVEY

Part I—Identification Data

1. Identification Number (To be filled in by C.O.L.C.)
2. Date of Survey Month Day Year
3. Type of Retail Outlet: (Check one)
   - ☐ Major Brand
   - ☐ Secondary Brand
   - ☐ Independent Brand
4. Name of Retail Outlet
5. Address:
   - Street
   - City State Zip Code
6. Brand Name
7. Ownership: Characteristics (Check one)
   - ☐ Dealer Owned and Operated
   - ☐ Major Co. Owned and Operated
   - ☐ Jobber Owned and Operated
   - ☐ Independent Supplier Owned and Operated
   - ☐ Leased from Major
   - ☐ Leased from Jobber
   - ☐ Leased from Independent

Part II—Product Information (Provide the following information with respect to each of the requested dates)

1. January 10, 1973

Type of Product (a)	All prices expressed in cents per gallon: Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (Col. b — Col. c) (d)	Less Net Purchase Price (e)	Gross Margin (Col. d — Col. e) (f)	Octane Number (g)
(1) Premium Gasoline						
(2) Regular Gasoline						
(3) Low Lead Gasoline						
(4) Diesel Fuel						

2. May 15, 1973

Type of Product (a)	All prices expressed in cents per gallon: Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (Col. b — Col. c) (d)	Less Net Purchase Price (e)	Gross Margin (Col. d — Col. e) (f)	Octane Number (g)
(1) Premium Gasoline						
(2) Regular Gasoline						
(3) Low Lead Gasoline						
(4) Diesel Fuel						

3. June 13, 1973

Type of Product (a)	All prices expressed in cents per gallon: Gross Selling Price (b)	Less All Taxes (c)	Adjusted Selling Price (Col. b — Col. c) (d)	Less Net Purchase Price (e)	Gross Margin (Col. d — Col. e) (f)	Octane Number (g)
(1) Premium Gasoline						
(2) Regular Gasoline						
(3) Low Lead Gasoline						
(4) Diesel Fuel						

Chairman HUMPHREY. Senator Percy, since you posed the question, maybe I will forgo protocol and let you pursue that.

Senator PERCY. Well, I would rather wait my own turn.

Chairman HUMPHREY. Go ahead, it's fine.

Senator PERCY. If we are all interested in that particular problem, and you all have service station operators, I will ask it then on behalf of my colleagues.

I think you have heard the question stated before, and what is the answer? Are you trying to force some gas stations, independent gas stations out of business? They maintain that they have been told there are too many of them, that they ought to be forced out of business.

Is this the mechanism for doing it? Is that the intent and purpose of it?

Can they operate on a 7-cent margin with the increasing costs they have?

Anything you can help us with in this area would be appreciated by them and by us.

Mr. DUNLOP. Mr. Chairman and Senator Percy, let me say this. As I tried to explain, we have said to these men and their organizations—and you may be assured that we have met with many of them, as you have—that we originally set the January 10 date for margins in the proposed regulations, and released those proposed regulations for comment. Many people came in for comment. We just did not issue these regulations without providing everyone in the country an opportunity for comment, and as my prepared statement makes clear, lots of comments were received.

Looking them over, people said there were a number of price wars in effect on January of 1973, and looking over those data that were submitted to us, we decided that a 7-cent minimum margin on top of product costs of August 1 would be an equitable position.

Now, as you and I know, a great many gasoline retailers have come in and said that this is in their view inequitable. My position immediately was, well, we have committed ourselves clearly. We have reason to believe those margins rose during the spring of this year; 1 cent a gallon, as you know of gasoline in the United States is $1 billion out of the pockets of American consumers, and so we said to them, gasoline dealers and heating oil dealers, we are as interested as you are to find out the facts of the situation. We tried to get them during the comment period. We got some. If these facts are wrong, we would like to ask you to provide us with the requisite information. We would like it by Tuesday. Here are the forms, simple as we know how to make them, separately for heating oil and separately for gasoline. Get them in to us on Tuesday, and promptly thereafter we will make an upward adjustment.

We know the price of products has risen as a result of increased import costs. We have committed ourselves publicly, I do so again, to raise those prices promptly after receipt of that information next Tuesday, and so we feel that we should be able to take care of the legitimate complaints by looking at that information. We feel that from time to time thereafter it will be necessary to make further adjustments as the amount of foreign oil imported grows and the price of foreign oil continues to rise. That is our view.

Senator PERCY. Well, specifically, Governor Sargent of Massachusetts said yesterday after the meeting that was at the Council that the ordinances regarding the Governors' charges will be changed, and is this true, and if so, how much?

Mr. DUNLOP. I say to you, I think the only authorized statement by the Council; namely, that I am aware of, is that next week when we get those data, on Tuesday, we will promptly review it and make an upward adjustment in the ceiling prices as the regulations provide. How much, I don't know, because I have not seen the data, but we have committed ourselves to make an upward adjustment.

Senator PERCY. Assuming the data is available on Tuesday and assuming it does testify out for a revision, what is the processing time

for your machinery to get underway? I know it is faster than the rest of the bureaucracy, but how fast is fast?

Mr. DUNLOP. My answer to that is a matter of days.

Senator PERCY. In a matter of days. Is that 5 days, 3 days, 10 days, 50 days, 150 days?

Mr. DUNLOP. I had in mind, sir, a very short time.

Senator PERCY. Is short time a week? Less than a week?

Mr. DUNLOP. I would hope it would not be longer than that.

Senator PERCY. No longer than a week.

Thank you very much.

Senator JAVITS. Just a followup on that.

Senator Percy has quite properly asked the question for all of us, but the thing that interests me, is if there is any change contemplated in the regulation related to passthrough?

In other words, if you are going to adjust the price on Tuesday, or whenever you will within the next week, that will take care of this particular bulge. Now, if there is another one then they are going to have the same problem.

For example, one of the witnesses on this morning is from Long Island, my own area, and they really have a very, very deep complaint.

So my question is: Is the Council considering changing the regulation so that the passthrough may be automatic as it is for everybody else?

Why should this particular group of businessmen be caught?

Mr. DUNLOP. I do not know of any intention to change the regulations, Senator, and the reason for it is very simple. These prices have risen more sharply in our economy than almost any other. We have included ceilings, specific ceilings, as we have done previously in the stabilization program when similar conditions existed. For example, in red meat, because of the enormous inflation that had existed in that area. We feel that it is possible to monitor the increases in costs for a product, and to promptly make adjustments on a periodic basis.

If we were to allow unlimited passthroughs at any time, given the shortages, in our view you would have a rather chaotic pricing situation. It is one that we could not adequately monitor, and it is a situation which it seems to me is considerably adverse to the position of the American consumer.

Can I ask Mr. Walker, our general counsel?

Senator JAVITS. I want to get a reply, of course, Mr. Walker, please.

Mr. WALKER. Of course, I would make only the following additional observation, Senator. During the course of the planning process for phase 4, we gathered rather substantial data as to dealer margins at the retail level on gasoline. Some of that data is set out in appendix B to Dunlop's prepared statement.

The data really very clearly showed that during the period of the feared gasoline shortage this spring, the dealers substantially hiked their margins, and this increase in dealer margins was a substantial contributor to the inflationary trend in retail sales of petroleum products, which Mr. Dunlop referred to in his oral statement by giving the figures at the WPI and CPI levels of increase in the prices in the petroleum products.

Consequently, it was our view that given the trend that has existed during the past several months toward increasing dealer margins,

the Council ought to establish a break in that trend and ought to establish ceiling prices with the commitment to increase them periodically as the costs underneath those ceilings increase, for the purpose of protecting the American consumer from unnecessary price increases.

Senator JAVITS. It is clear, is it not, however, that this is a unique decision, aside from the red meat prices, which is another one from which you did the same thing. This is the only area which you are doing what you say.

Mr. WALKER. This is the only area in which ceilings are currently in effect.

Senator JAVITS. Now, the dealers are out-claimed. I am looking at the prepared statement of Mr. William F. Kenny III, which says that you have not checked their industry figures, and the history which they give in their testimony in an area typical like Long Island in New York, indicates that they have been very badly squeezed. At the time they had, for example, January through May of this year, 13.6 percent increase in product cost, and they claimed that their margins were so ridiculously below that that they simply took the rap themselves, and the consumer was simply getting a benefit out of their losses.

Now, may I ask you this? I realize the issue. I understand what you said, but may we tell our people—and Mr. Kenny is right here; Senator Percy, Senator Humphrey, and Congressman Widnall have the same problems that I have—that simultaneously with the submission of their data on price, that they may submit data to you—and I am sure they will give it to us—seeking a change in the regulation and justification for that change, and that the Counsel will give with equal solarity, a consideration of their strong conviction. They have been before with me in quite large groups stating that they are really being discriminated against most unfairly.

Mr. DUNLOP. The answer to your question, which I intend, is clearly in the affirmative. That is to say, we would afford that sincere consideration of any petition submitted to us by any producers group in the country. And so I say that in sincerity, certainly.

Also, I would point out to you that some of this information that is relevant to that will be forthcoming on those two forms which are attached to my prepared statement where we asked very clearly what peoples' margins were on certain specified dates, and in particular, on January 10, 1973, on May 15, 1973, June 1, 1973, August 1, 1973, September 1, 1973, and the current date.

So we will be in a position with that information before us to view the situation in a more comprehensive way, then the published data allow and the data that were submitted to us by many of the gasoline association people during the period in which our regulations were out for comment.

Senator JAVITS. Am I to gather, then, Mr. Dunlop, that the change in the substantive regulation and the change in price will have parallel consideration?

Mr. DUNLOP. Well, except for the fact that as you yourself have said, it is probably a lot simpler to review the data with respect to the change in the ceiling price than to review the regulations themselves. I think it is clear that the priority between the two should be given to the adjustment to the ceiling because of the squeeze that is on.

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Senator JAVITS. But they will be parallel.

Mr. DUNLOP. Yes.

Senator JAVITS. It is a fact, is it not, Mr. Dunlop, that the dealer is entitled also to a fair break, and that he can do a lot with respect to service to the customer which anybody, including the Cost of Living Council, would not want done.

Is that not so?

Mr. DUNLOP. That is correct.

If I may just be philosophical for a second, this is simply typical of, if I may say so, sir, hundreds of questions that come before the Council where one is in a difficult position of balancing the competing interests of different producers and the interests of the consumer. That is not a happy position but nonetheless, that is our responsibility, and I intend to discharge it with equity and with prayerful regard particularly to the facts.

Senator JAVITS. May I add just one other point, which is important.

In some areas of the country, notably Long Island, 90 percent of the distribution to homes is by the independent dealers who feels himself squeezed this way. Therefore, a quotient or shortage or deprivation may very well occur because the dealer simply cannot stay in business in a given area, or it may result that they finally, with highly distasteful respect to the antitrust laws, may cut a lot of the independents out and let the majors take over.

I call that to your attention because that is a real problem, certainly on a regional basis with us.

Mr. DUNLOP. May I comment on that and ask Mr. Walker to comment on a further aspect of that?

One, you are aware, in my exchange with you earlier, we were really talking about gasoline.

Senator JAVITS. I understand.

Mr. DUNLOP. You are aware that with respect to heating oil there is no advanced approval required from the Council, the Cost of Living Council. Once a month, the heating oil dealers are entitled clearly under the regulations to simply increase their price and within 5 days notify the IRS, in accordance with the rise in dollar-for-dollar product costs. So the problem that you referred to earlier does not really apply to the same degree.

Senator JAVITS. Does that not only apply to imported oil?

Mr. DUNLOP. Yes.

Senator JAVITS. Well, what about all the domestic oil?

That is just the point. That is where they are squeezed.

Now, this is something you have got to consider very seriously because they are clamoring to me that they will simply have to close down.

Mr. WALKER. If I might add, Senator, the Cost of Living Council has also issued a form to heating oil retailers and asked them to advise us as to their costs, price, and margin information, and we have indicated our intention to increase that ceiling as well, which is the mechanism that will enable those companies to recover the increased cost of domestic crude oil as well.

Senator JAVITS. That is what I am saying. You will give parallel consideration to a change in the basic regulation, and that applies to the heating fellows as well as it applies to the gasoline fellows.

Mr. WALKER. I wonder if I might make one additional observation which I think is consistent with the line of questioning that you have followed.

Senator JAVITS. Well, just answer this and then I will yield my time.

Mr. WALKER. Well, the observation is, I think, that many dealers feel that they have been singled out as a sector of the economy that is being dealt with more stringently than other sectors of the economy. I think it is important that this committee understand that there are—that a small business exemption, which was added to the regulations midway during phase 2, is not applicable throughout the economy—various sectors of the economy where small economic units have a disproportionate impact upon price movement, where the small business exemption is never applied. For example, in the health industry it has never applied. It has never applied in the construction industry. It was withdrawn in May or June of 1972 from the lumber industry because their small firms were making a disproportionate contribution to the inflationary increases we experienced there.

It was withdrawn in March of this year for small retailers of meat. Consequently, the action of the Council in dealing with the small retailers in this area was aimed specifically at the inflationary increases which the consumer was experiencing and which we felt had to be controlled.

Senator JAVITS. Thank you, Mr. Chairman.

Chairman HUMPHREY. Are you through, Senator Percy?

Senator PERCY. No; I have other questions.

Chairman HUMPHREY. May I move to go to Congressman Widnall?

Senator PERCY. Yes; I think we should divide up the time a little bit.

Representative WIDNALL. Thank you, Mr. Chairman.

I just have three short questions at this time. I think you can give fairly short answers at this time.

Why did you choose the date of May 15 for refiner retailers and the date of January 10 for all other retailers?

Mr. WALKER. Congressman, the May 15 date is the date which has been established for controlling crude prices and all refinery prices. On May 15 crude prices were more or less in equilibrium. A second wave of prices increases for crude had not yet begun. The first wave which began in March of 1973 had more or less been completed.

Consequently, May 15 was a point in time in which the basic raw material costs were in equilibrium. That, then, is the date which we chose for establishing the ceiling price for domestic crude petroleum. In addition, that is the date which we established for controlling all the prices of refiners. Their base prices for the products which they sell are premised upon that May 15 selling price, and that also applies to the products which they sell as retailers.

One of the difficulties that we experience in regulating an industry of this type is the virtually infinite range of characteristics among the sellers in the industry. There are refiners who are selling to resellers. There are refiners that are selling to terminal operators. There are refiners that are selling to themselves as retailers. There are refiners who own their sources of petroleum, who have arrangements abroad for the production of petroleum, those who own their own tanker fleets, who charter ships.

Our purpose has been to seek to establish a single, uniform system by which we can establish and control price for the multifaceted operations of these integrated refining companies.

Mr. DUNLOP. May I just add a specific point to your question, Mr. Widnall.

The retailers, as I point out elsewhere in this memorandum, the retailers who are refiner-owned, have not changed their prices for the previous 2 years, so the question of that date, from that point of view, was not a significant issue. You will find that in my prepared statement.

Representative WIDNALL. Well, following up on that, why did you allow a passthrough of costs to the refiner-retailers and not allow a passthrough to the other petroleum dealers for their products?

Mr. WALKER. Now, if I may comment, that is not a correct interpretation of the regulation. Establishing ceiling prices for No. 2 heating oil, and No. 2 diesel fuel, gasoline for refiners who are also retailers, the ceiling price is the May 15 price plus the increased costs of imports and domestic crude through July 31.

Representative WIDNALL. I do not think it has been clear as announced. It should be clarified.

Chairman HUMPHREY. In other words, are you saying, if I may pick that up, that the independent and the wholesalers are treated the same as the majors on this passthrough?

Mr. WALKER. There are ceiling prices on both kinds of retailers, Senators.

Chairman HUMPHREY. Yes.

Mr. WALKER. For the nonrefiner retailer, that is for the 90 percent of the retail gasoline stations that are not owned and operated by a major refinery, the ceiling prices are the cost of the product on August 1, or the cost of their inventory on August 1, plus the markup that they applied on January 10, but a minimum of 7 cents per gallon. For the refiner owned and operated station, it is the selling price on May 15, 1973, plus increased costs of imports on domestic crude between that date and August 1.

Mr. DUNLOP. Mr. Chairman, the direct answer to your question is, a retailer, whether he be independent or affiliated with a major company, may not increase the retail price without advance approval of the Council. In that respect, they are identical.

Representative WIDNALL. One more question, Mr. Dunlop.

In your prepared statement you said oil is no longer abundant in the United States. In fact, U.S. crude oil output is now declining annually at about a 3-perecnt rate.

To what do you attribute that? Is it a conservation measure? Is it a State regulation limiting the output of the oil within the State, or is it a diminuation of the reserves?

Mr. DUNLOP. I will let Mr. Owens, if I may, answer that who is the Director of our Energy Division.

Mr. OWENS. In effect, we have a declining rate of production as we deplete the amount of oil in a particular reservoir. This is a natural phenomenon, not the result of any administrative approach, either of National or State level.

Mr. DUNLOP. We are using it up.

Representative WIDNALL. I understand that, but we also have new sources of supply here in the United States, new wells that are brought in.

Mr. OWENS. We have reached a point recently, Congressman, at which we began using more oil or draining more of our oil reserves than we replaced annually each year. In other words, whereas we once had a considerable amount of oil in the bank, we are now drawing our reserves more rapidly than we are replacing our reserves with new discoveries. This is a phenomenon of just the past year or so.

Consequently, the net result is a 3-percent decline in the production annually. To overcome this, to stimulate increased production and increased exploration for new reserves, we have instituted and put into place the two-tier system.

Chairman HUMPHREY. I have a few questions.

First of all, Mr. Dunlop, some time ago, Senator Dole and myself called a meeting here of the Committee of Agriculture, and we had in people from the fertilizer industry as well as representatives from the Department of Agriculture.

You are familiar with that meeting?

Mr. DUNLOP. Yes, I am, in detail.

Chairman HUMPHREY. We addressed a communication to the Secretary of Agriculture. This morning I received a letter back from the Assistant Secretary, Mr. Brunthaver, saying that the problem that we presented to him in reference to the price of domestic fertilizer had been studied, and he said as follows:

> Because of the desire to make a timely decision, we are planning to complete the development of this material and furnish it to the COLC, the Cost of Living Council, Tuesday, September 18.
>
> This information will be furnished without recommendation, and further analysis will be made by USDA.

What he refers to, in other words, is that they make an analysis of the problem, the shortage, the price, et cetera. Now, apparently it is in your hands, and the situation as it was related to us is that the Cost of Living Council has a $70, approximately $70 price on some certain types of fertilizers, and overseas it runs at about $90 or $92. So we are having an outflow, whatever the price range may be. There is a tremendous outflow of fertilizer from U.S. producers into foreign markets because they get a much better price in foreign markets than they do at home, and therefore the shortage of fertilizer, particularly in the South, in the Southwest where fertilizer must be applied to the land, is falling.

Now, what are you going to do about it?

Mr. DUNLOP. I recall that occasion when I met with you and your associates, Mr. Chairman. The study to which the communication and the Assistant Secretary of Agriculture refers has not come to me. I checked last night. I would like to see it before I am required to make a decision on the petition for decontrol.

I look forward to receiving it soon.

Chairman HUMPHREY. Well, I would certainly get a hold of Mr. Brunthaver and tell him to get on the stick. He said that they were furnishing it to you on Tuesday, which was 2 days ago.

Mr. DUNLOP. I have been looking for that, Mr. Chairman. You are not the only person who has a deep and abiding interest today in fertilizer, and I get a great many calls about it. But my statement stands. Therefore, I have been very much interested.

Chairman HUMPHREY. Now, we do need some action on this. I know that you are going to look at the material when it comes in because

you are fully aware of the consequences. The consequences of the loss of fertilizer for our domestic users could be catastrophic, which we know. It could be a serious blow to our food production, and therefore to food prices, and of course, to the entire economy.

So we have got to remedy it one way or the other, whether it is price adjustment or export controls, whatever it is. Something has to be done, and it has to be done now. I know you recognize that. Time is of the essence in this. We have about 120 days, less than that, really, for the application of fertilizer in some areas of the United States, in the Southwest, in Oklahoma, and then as you move up, let's say 120 days of the winter wheat crop, so we need to get at it. And we want to know that you will give us your cooperation. And I will see that the Department of Agriculture, to the best of my ability, gets that material over to you.

This gets into the problem also of oil. You mentioned here the domestic crude oil price, and then there is the price on the imported oil, which is the world oil price. You are permitted to pass through on that, and I will not go into that question any more.

But Congressman Aspin made note of the fact that certain amounts of domestic oil—that is domestic crude—was going to Western Europe and selling it for twice what they could get in the fuel-short United States.

Now, I know that you are not in charge of the Department of Commerce, but is the domestic price ceiling here precipitating an outflow of domestic crude?

If so, that only complicates our situation, because much of our fuel oil is, by the way, out of domestic crude.

What is the situation?

Mr. DUNLOP. My comment about that, Mr. Chairman, is this. I have seen the same press comments on it.

Chairman HUMPHREY. Yes.

Mr. DUNLOP. I think it should be important that it be clear in the discussion. As I understand, it relates to heating oil rather than crude oil. And the statement, as I understand it——

Chairman HUMPHREY. You are correct. It was fuel oil.

Mr. DUNLOP. No. 2 heating oil has been exported out of the United States, say, to Rotterdam, and then, reimported into the United States at the very large differential price that now exists between heating oil domestically produced and that imported from abroad. That our present price situation would make that possible, I think, is clear.

I would only say this to you, though, and this represents in part a comment, Mr. Chairman, on the same point in a way that is raised on page 32 of the staff study, which you were good enough to send to me.

Chairman HUMPHREY. Yes, sir.

Mr. DUNLOP. It seems to me that that is a problem. The important question is how large a problem? What is the magnitude that is involved?

Because the alternative solution to the problem would be to allow the domestic price of heating oil to rise to the world price. And let me give you just that rough——

Chairman HUMPHREY. Well, is there not another alternative? Just an embargo on the shipment in the time of short supply of domestic oil, either crude or refined? Is that not the other alternative?

Mr. DUNLOP. That is another alternative; yes, sir. But the price consequences, as you know, would be unacceptable. Our prices are about 15 cents a gallon. Foreign prices are anywhere from between 25 and 34 cents. And to let the domestic price rise to those levels, it seems to me, has a very serious and to me unacceptable impact on the American consumer.

Chairman HUMPHREY. I tend to agree with that.

Mr. DUNLOP. Well, I think we will very much pursue the matter with regard to the impact of our regulations on it. But it is—I suppose the laws of economics provide that when you have a foreign price higher than a domestic price, it is in somebody's interest to export.

Chairman HUMPHREY. The problem that we have here—and I think this may be true in other areas—is what we call transshipping, I mean a third party involved, where they ship out the domestic product, as you said, whatever port or whatever facility it may be—what was it you mentioned? Rotterdam? Yes, that seems to be one of the favorite ports.

And then it is shipped back into the United States and comes in as if under a new coat, as if it is an import. But it is an original American product that takes on a new citizenship by going to Rotterdam. It comes back as an import.

At a time when there is a shortage of domestic crude and domestic production, I think the Government cannot stand helplessly by and permit that to happen. That is circumventing the Cost of Living Council, and it is really penalizing the consumer. It just cannot happen.

I know it is not in your jurisdiction, Mr. Dunlop, and I——

Mr. DUNLOP. I am very much concerned about that, and you may be assured that we will pursue it, particularly with respect to the magnitude that it involves. If it is a little bit, that is one thing . If it is a significant amount, then, we are very much concerned about it, and I will call it to the attention of those officers of the Government in whose responsibility that remedy lies.

I am unwilling to accept the remedy of rising for the American consumer the price of heating oil from 15 to 34 cents.

Chairman HUMPHREY. I commend you for it, and your job is not an easy one, Mr. Dunlop, and I appreciate that we are all on your back from time to time about these prices. And I do not think the remedy on this one is to raise the price to 34 cents, or 30 or 28, whatever it may be.

I think the remedy is for the Government to act as a government and not as a separate economic unit, and to take a look at the total picture and see what needs to be done.

Now, Mr. Dunlop, by the way, it will be interesting in the information that you get on the subject for us to know the magnitude of what this is or what its prospects are.

Mr. DUNLOP. Fair enough.

Chairman HUMPHREY. The same thing, I think, might be also traced to the fertilizer industry. I have reason to believe that fertilizer can also come in the same way, as an imported product and therefore not subject to the price controls.

Mr. DUNLOP. Yes. Of course, the price differentials also have to be discounted, as I am sure you are aware, by transportation costs, by handling charges. Certain differentials are so narrow that they do

not induce this device. But the differential may become so wide that it may.

Chairman HUMPHREY. That is correct. I think we must not overly generalize from it.

Mr. Dunlop, you are not in charge of the energy policy of this country. I know that. But you are sometimes the focal point. When anything goes wrong, they generally come to you and say it is your regulation, so it is the price. And I have noticed that, and I do not envy you your position, even though you bear up well, may I say, under it.

Mr. DUNLOP. It does not bother me at all.

Chairman HUMPHREY. And we are grateful to you.

A question that keeps coming before this committee and others is the whole matter of whether or not, with the tight oil or fuel situation, a price control program can really work without mandatory allocations.

Do you have any thoughts on that, or is this beyond your jurisdiction, and do you not want me to press you, even though I shall?

Mr. DUNLOP. Mr. Chairman, I do not wish you to press me. I will do everything I have learned in my life to avoid giving you an answer.

More specifically, I will say that—as a first shock—I am so busy dealing with your problems of oil, fertilizer, propane, all of which have been talked about this morning—not to mention a whole host of food matters and now and then a serious wage matter—that I have not had the time to give serious consideration to the question of what contribution an allocation system could make. And, in my custom, I would hate to express a judgment on a matter that I have not thought about very carefully, sir.

Chairman HUMPHREY. Well, now, just in case you should have an extra hour some time during the week, Mr. Dunlop, may I suggest you put that brilliant mind of yours to work at it? Because any man that can conceive the rules and regulations that you have, can, obviously, find a system for allocations that will work.

Mr. DUNLOP. Thank you.

Chairman HUMPHREY. I understand your reluctance in this. It is out of your jurisdiction, but it does pose a problem here. Because, for example, here the other day we had considerable testimony by Duke Ligon of the Oil and Gas Office—who, by the way, also, I think, is trying to do and is doing a good job within what frame of law that he has—stated that black-market activities are now quite extensive with regard particularly to propane. He stated that the cases coming to his attention are referred to you.

What have you found with regard to black marketing in propane?

Mr. DUNLOP. Well, Mr. Chairman, the subject of propane is a matter that is actively before me. I spent the last hour of last night, or early this morning, on a book about an inch and a half thick with the basic papers dealing with propane. We have before us a position to decontrol propane, with the strongest part of the case, in my judgment, related to the agricultural side, some of which we heard earlier this morning.

Being candid with you, the problem I have with that action, which I am assessing, is this. If one were to decontrol propane, clearly you are not going to produce any more propane thereby in the United

States. But I am not sure that the decontrol of propane would result in the propane going more than in the past to agriculture interests. It may very well go to utilities and other consumers who have a fair amount of purchasing power and market power and long-term interests in the matter.

And so the real question—this is another one of those, Senator—is whether this particular proposed price action will help supply. Will it result in unduly high consumer prices? And how do we balance that thing off at the margin?

Now, that is what my book is all about.

Chairman HUMPHREY. Well, now, you put another chapter in the book called the "Appendix on Allocations." And I think, really, you and I together could work this out if I could get you to put that brilliant mind—I repeat, that steady, persevering mind of yours—to this whole subject of mandatory allocations.

Because I do not believe there is any way that this, just by increasing the price of propane, that you are necessarily going to get to the farmers that are in need of it. I think your argument is basically right. It will maybe run to the highest bidder, and that may not be old Joe Swenson, because he may not be able to bid against some big electric utility or some big gas company.

I will let you off the hook for a moment. I have to go vote, you know, and Senator Percy is on his way back. If you could give us about 5 or 10 more minutes.

Mr. DUNLOP. Always happy to be available.

Chairman HUMPHREY. I will recess for a moment. Take it easy, and Senator Percy will come back and open the hearing. We are kind of on a shuttle system today.

[A brief recess was taken.]

Senator PERCY [presiding]. The subcommittee will resume, please.

Senator Humphrey will be back in just a moment. Meanwhile, the minority shall seize control and use the valuable time of our very distinguished witness today.

Mr. Dunlop, my first two questions may be somewhat redundant, but they may be phrased in just a little different way, just to be certain that the record is absolutely clear in this matter.

You have stated in your prepared statement today that U.S. crude oil output is declining, and the phase 4 regulations permit a pass-through of the industry's costs, the foreign petroleum imports, in the form of higher prices.

Is it not true that the increased costs of imports must ultimately be absorbed by service station operators?

How do you justify the Cost of Living Council placing a burden of the industry cost increases on the small business sector?

Mr. DUNLOP. Well, Senator Percy, we have—as I said earlier—committed ourselves in regulation form to a review periodically and now, on our first review, to increase the price of gasoline to reflect those higher prices made necessary to imports, or perhaps other increased costs. And on gasoline, we have felt it important not to have an automatic adjustment, but to make an adjustment periodically to accomplish the commitment we have made.

So we are not asking the gasoline dealers over any extended period to absorb the very large increases of costs that may come as foreign

prices go up. We have not said this set of ceiling prices will, as in meat, remain unchanged for any length of time. We are anxious to review the factual base for these higher costs and will, I repeat, promptly, in a matter of days, increase those ceiling prices.

Mr. WALKER. If I might add, Senator Percy, I think it is important to understand that there are also controls on the prices which refiners charge and resellers charge as well. There is a whole array of controls in this system. Consequently, those prices that come through the system to the retailers are controlled on the way through.

Senator PERCY. In your prepared statement, Mr. Dunlop, you note that in the first 6 months of this year, wholesale prices for gasoline and No. 2 home heating oil had risen over 30 percent in both cases, while retail consumer prices had risen less than 11 percent in each case.

Presuming that the wholesale prices will continue to rise, what portion of the difference between wholesale prices and retail prices do you expect the retailer to be able to passthrough as a result of the periodic upward adjustments you have described?

Mr. DUNLOP. I am not sure I thoroughly understand that question. But I think the answer is that with regard to product costs, with regard to the rise of crude costs, it is our intention that they should recover the full amount, dollar for dollar.

Senator PERCY. My remaining questions would relate in broadest terms to your overall responsibility. And you know I consider the responsibility that you bear, one of the heaviest responsibilities, affecting more people, more consumers, the welfare of the country, than any other position in Government, really. And the power you possess, is an awesome power, but absolutely essential and supported fully by the Congress of the United States and I am sure by the people of the United States, until such time as we can rectify the laws, the normal laws that supply and demand operate under, which we all believe in more than regulations.

The two ways which it would seem that we could help ourselves—stimulate supply, which will automatically, then, bring down prices; and also lessen demand when it becomes excessive—now, that can be done voluntarily or involuntarily. The overall problem we are dealing with in the cost of living is the problem of inflation, and I just have a quick reaction to a few approaches we might take.

How much importance do you attach to the work that Congress is now doing to regulate its own budgetary procedure in such a way as to put our own ceiling on, not take action on any appropriation bills until such time as we have established a ceiling and then make it exceedingly difficult, once we have established that congressional mandate, to break that ceiling? In other words, not have a rubber ceiling.

I say this because Senator Ervin and I just last night completed an article. We have introduced legislation on this. It has passed overwhelmingly in the Subcommittee of Government Operations, and it is going now to full committee, and we hope to report it out to the Senate. It puts a very, very rigid, tough ceiling on, but it enables a thorough debate about national priorities. But it is a discipline that I think Congress must impose upon itself.

How important is that, in your judgment?

Mr. DUNLOP. Senator Percy, if I could answer that not as the Director of the Cost of Living Council but as a person who has been interested in the inflation problem for a long time, all I would like to say is that it is the one move most necessary to give the fiscal tool any credibility and any effectiveness. I cannot think of a fiscal measure more important in the long-term, not just in the current period, but as a structural reform in our economy and society to deal with inflationary problems than to provide that sort of fundamental assistance to making the fiscal arm, as contrasted to the monetary arm, a viable and effective tool in any fight against inflation.

I commend you very strongly for it, and as an individual, I think it is long, long, long overdue.

Senator PERCY. In other words, just raising interest costs is not the answer? That is a harsh, harsh penalty for many people who depend upon borrowing money to finance homes, to finance businesses, terrible on small retailers and farmers, and so forth, that need credit. So that these other tools are essential and necessary.

Let me ask your judgment on taxes, taking into account that this is not a matter where, maybe, there is not a coordinated administration position at the present moment. Our mutual friend, George Shultz, has told Mel Laird to keep his cotton-picking hands off that.

I think that Mel Laird has every right and should be involved in the problems of inflation, because it is the biggest domestic problem that we have. And I think that the administration is out of its cotton-picking mind if it does not have under consideration a range of taxes that may have to be imposed if cutting spending is not as effective as we all would like to see it.

Would you feel that it is not unthinkable to consider a tax that would be a temporary tax on business and on individuals where the money is set aside—taken away now, set aside—and repaid to corporations and individuals at such time as unemployment is up and business activity has slowed down and we need the stimulant?

Is that something that you as an economist feel that we should at least give consideration to?

Mr. DUNLOP. Well, let me comment on that, Senator Percy, in this way. I obviously wish to be clear and careful.

The first is that in late May or early June, when the President was considering what further strengthening of the stabilization program was appropriate, I as an individual and others in the administration proposed, in response to numerous meetings with him and in response to his written requests, a proposal somewhat similar to the sort of tax that you were talking about. I felt then that it was essential, and, indeed, as an academic economist, I would hope that it had been done much earlier.

Now, the problem, I think, Senator Percy—and the nature of the decision—really hinges, as I see it, on two other matters. Because of these two considerations that are in an area outside of my immediate responsibility, I was happy to, so to speak, accept the judgment. First of all, we had the House Ways and Means Committee working on the problem of a trade bill, which is a very important matter; and the question of whether its activity should be set aside from that function to turn to tax matters, which every indication indicated would take a great many days, weeks, months, of deliberation, which were likely

to be highly contentions with an uncertain outcome, and where the resulting facts might, in all probability, the best estimate, not be available until early 1974.

I think it really was those sorts of timing considerations, those kinds of practical considerations relating to the congressional process that, in the end, carried the day. It was not at that time wise or expedient to pursue the kind of suggestion which I myself proposed and which others, at the same time, also advanced for consideration.

Senator PERCY. Specifically, I would like to ask your judgment on a piece of legislation I introduced this week to increase taxes on automobiles. It relates to fuel, and it would give several years' advance notice. But the schedule I put in—if a car produces mileage over 20 miles a gallon, no tax, then it goes up to a tax of $381 if it provides less than 5 miles per gallon. But by 1981, that goes up to a tax of $1,090 for gas-guzzling dinosaurs that give you less than 5 miles per gallon, and then it ranges on up.

Do you think a tax like that is in the national interest, to provide the incentive to the automobile industry and purchaser—and this is a tax on the automobile producer—to do that is in the national interest now, produce cars that provide better mileage?

Mr. DUNLOP. Senator Percy, I would like to respond to that essentially, again, as an academic person. And I report to you that in our deliberations in May and June we considered two forms of that kind of tax.

One is kind of what I call the horsepower—a differential rate of taxation which varied as you indicated, and second, simply a higher gasoline tax, which comes naturally to an economist if you are facing potential shortages.

A price tax could reduce the consumption had at that time as the economy is cooling. We did consider those two alternatives, then.

And I for one, in the form you recommend, think that it should be given very, very serious consideration.

Senator PERCY. From the standpoint of increases?

Mr. DUNLOP. The question of timing, of course, is an independent and more difficult question.

Senator PERCY. Absolutely. I will accept that claimer.

From the standpoint of increasing supplies and looking down, Governor Anderson was here; you were nice enough to be in the room at the time. We are all concerned in the Midwest about getting supplies into the Middle West and not being too dependent on both coasts, as we have always been, and we pay higher prices.

If it looks like there are sufficient reserves up there in Alaska to provide—not only the Alaska pipeline, which I voted for, but also a trans-Canada line—would you not feel that it would be desirable to move in the direction of having both available, so that it is not an ecological question, it is just a matter of increasing supply to the heart of of the country? We think the Midwest is the heart of the country.

Chairman HUMPHREY [presiding]. Oh, the heart and soul.

Senator PERCY. I knew that would get our distinguished Chairman's eyes to glisten, as mine do.

But we need a source of supply coming directly in there, and if there is an adequate source, would it not be desirable now? It is going to take years to build it. Let's just move ahead in negotiations and see whether we cannot get funding for that project.

Mr. DUNLOP. Senator, I am not that familiar with the so-called second one of those lines. At one time, I did a fair amount of work on the line which is to be in Alaska, hopefully.

I may comment in a footnote, there are some very interesting labor relations problems relating to construction, which has been one of my major interests, which involves a good deal of work upon manpower requirements and questions related to that pipeline.

I always thought that if we could find some way of working out our environmental concerns that it was absolutely essential for the country to have that oil so near and in the Western Hemisphere. I am not competent, and I have not studied the question of a second line. But in principle, I would say all we can do to increase in the foreseeable future both continental as well as Alaskan oil production, we should certainly do.

Senator PERCY. Finally, Mr. Burns and I have been working together for months on the possibility of a sliding investment tax credit to give the President authority, subject to reversal by Congress, if the Congress in its wisdom saw fit to reverse the decision—maybe give the President authority to vary the scale from 3 percent up to 15 percent and to go in on industries where we are in short supply, I think we need 15 percent to provide newsprint, to provide, certainly, refinery capacity, to stimulate moving capital into those areas where we have a demonstrated shortage and where the continued shortage is going to create high prices with an inadequate supply for the demand.

What is you own judgment as an economist as to whether this ought to be seriously considered now as an increased tool to fight inflation now and in the future years?

Mr. DUNLOP. I might report that that, too, was one of the tax measures that we gave consideration to in the discussions of late May and early June, with Arthur Burns very much participating in those discussions and advancing that view then as now.

I must confess that I have not really reached a conclusion on this, although I normally have not much difficulty reaching conclusions on issues. This one does trouble me for the following reason. In one sense, it is fine. As the economy was heating up, you could change those ratios one way and if things came down, change them another way. And these is something to be said for it from that point of view. And in a time like the first 6 or 8 months of this year, you would perhaps have found it useful.

I think the argument against it which ought to be seriously addressed and which I am personally very concerned about, is the following: The decisionmaking processes of American business are not that kind of tunable by fiscal measures. And second, there does not exist in the Government, in any government, that kind of wisdom and foresight. We have not been very good at times in forecasting so that we have a clear perception, an unclouded perception, of what the next 18 months look like. And when we think of the fact that most of these plant facilities take anywhere from 18 months to 3 years to build, although I recognize that equipment time leads are much shorter for a new plant, I think that argument needs to be very carefully weighed, that it may be an excessive amount of fine tuning, to use a phrase, which mankind does not have the insight and data to handle properly. That is my concern.

Senator PERCY. Mr. Dunlop, I know you must leave. Maybe if one of your colleagues could perhaps answer these questions.

Illinois Petroleum Marketers Association have asked why all dealers could not have their margins based on May 15 instead of January 10. The difference is discriminatory, in their judgment, because the rest of the entire industry is based on May 15. And they also asked why jobbers were not included in the questionnaire which COLC has distributed for response by next Tuesday.

Mr. WALKER. Senator, I think that the answer to the first question—I alluded to the answer in response to an earlier question from a member of the committee. The May 15 date is the date at which crude prices were in equilibrium. It is the price which we have established as the basic control point. It is the date for establishing the price, which is the basic control point for all the mulitfaceted refiner operations.

In addition, as Mr. Dunlop pointed out, the prices charged by refiner retailers—that is, refiner owned-and-operated stations, which comprise somewhere on the order of 10 percent of the total number of retail outlets in the United States—has remained virtually steady over the past 2 years. Consequently, the differentiation between the May 15 date and the January 10 date in that instance is not inordinate.

Mr. DUNLOP. May I just interject one point further?

With these forms for collecting data, as I indicated to the committee a while ago—it may have been while you were out, sir—we are asking for data for each one of the dates that have been talked about: January 10, May 15, June 1, August 1, September 1, and the current period in September. With these data, it is conceivable that we may want to review that decision.

We now have some data from the people directly. We have had previously published data which show that these margins grow appreciably during the course of the past year. And it thereby contributed not insignificantly to these rises in prices which have been of concern.

Senator PERCY. Thank you very kindly. I know by Tuesday you will hear from the Illinois Gasoline Dealers Association.

Mr. DUNLOP. Let's have the data.

Senator PECRY. Well, if you want my judgment, I have listened to their story, and I think they have got a very, very sound, valid case. And I am just delighted that you are going to move with great dispatch on this.

I would like to commend the Chair for these excellent hearings. And once again, I think the creation of this particular subcommittee, which is the Chair's concept, is very, very vital and necessary, and came at a crucial time in our economy and history.

Chairman HUMPHREY. Thank you very much.

Mr. DUNLOP. May I just interject a point? If you have some data which has been presented to you which we may not have as yet, or have not received, I would appreciate your giving it.

Chairman HUMPHREY. Mr. Dunlop, would you please have one of your associates follow up with the Department of Agriculture?

Mr. DUNLOP. I will do that as soon as I get back.

Chairman HUMPHREY. I appreciate this. I want to thank you on behalf of the subcommittee. We have called on you a number of times, but you are very helpful.

I think it is good for the public to hear the best we can through the media and this committee what you have to say. The purpose of these meetings is not to harrass but, hopefully, to be informative and corrective. We thank you and your associates very much.

I want to call Mr. Lee C. White, and following Mr. White, Mr. William F. Kenney.

Now, might I ask if the mayor of St. Paul, Minn., is here? Is the mayor in the room? He will be coming back, the next witness after Mr. White will be Mr. Kenney, then.

Wr. White, excuse me. We welcome you. I am sorry we kept you waiting here, but these hearings do get prolonged, and we welcome you as a former official in our Government, who has served us with great distinction and honor.

You are now the chairman of the energy policy task force of the Consumer Federation of America, and I think there are very few men that have a wider knowledge of the problems of energy than you.

You have served as Chairman of the Federal Power Commission, is that not correct?

Mr. WHITE. That is correct.

Chairman HUMPHREY. For how long a period of time was that?

Mr. WHITE. From March 1966 to July 1969.

Chairman HUMPHREY. That gave you enough problems to wrestle with to qualify you as an expert.

Go right ahead and proceed with your testimony. There will be members, I am sure, coming in and out here because of the debate situation on the floor.

Mr. WHITE. Certainly, Mr. Chairman. I do understand. If it is agreeable, I would like to have my prepared statement included in the record and speak somewhat extemporaneously, and hit a few high spots and reserve most of the time for questions.

Chairman HUMPHREY. The entire prepared statement will be printed in the record at the end of your oral statement, and you go right ahead with your own testimony.

STATEMENT OF LEE C. WHITE, CHAIRMAN, ENERGY POLICY TASK FORCE, CONSUMER FEDERATION OF AMERICA

Mr. WHITE. Our organization, Mr. Chairman, is the energy policy task force of the Consumer Federation of America, and somewhat like your subcommittee, it has come into existence to serve what we regard as a very important need.

There are some tremendous energy policy debates going on, not only in the Congress, but across the country, and we detected the absence of any organized consumer voice. Consequently, we have put together a small coalition, and though small in number—21 organizations—the list of them, which is attached to my prepared statement, will suggest to you that we do speak for some very strong national organizations with large membership. We have such organizations as Consumers Union, the League of Cities, U.S. Conference of Mayors, the Cooperative League, the Consumers Union, United Auto Workers, International Brotherhood of Electrical Workers, the National Farmers Organization, the National Farmers Union, the American Public Power

Association, the American Gas Association, and the National Rural Electric Coops.

I think you get the point that the people in this country, at least through their organizations, are anxious to have their views inserted into the debates.

I don't know if your subcommittee has intended to be an advocate as much as a receiver of different views. In any case, we welcome the opportunity to come here, to respond to your very generous invitation to tell you a little bit about what we think.

I don't know that it will be very long before the mandatory fuel allocation program will come into being, but when it does, we ought not let the administration off the hook in terms of their belatedness. To me, their laxity is astonishing. On April 30 of this year, the Congress adopted the Economic Stabilization Act, to authorize the President to adopt the mandatory program. The administration has considered it and considered it and considered it, and every time concluded that voluntary is better than mandatory.

I just don't believe that that is the case.

When the U.S. Senate, by a vote of 85 to 10, adopts a mandatory fuel allocation program, and when the Senator from my native State of Nebraska, Senator Carl T. Curtis, leads the parade for a mandatory program, you can be sure that it is needed. Senator Curtis is not some left-wing kook. The Senator doesn't believe that the solution to the Nation's problem is more governmental intervention; that is not his natural style. I can tell you that I am sure that the farmers from Nebraska are making their views clear to Senator Curtis. I think that the House will follow suit very soon. I hope so.

Last week we noticed that 15 electric utilities took the unusual position of urging mandatory Federal allocations program. I can tell you, from my experience, that most of these men do not believe in just taking any problem you can pull out of the air and solving it with greater governmental intervention. They are facing, as are the farmers in your State and around the country, and the citizens, the consumers, a very real situation.

Chairman HUMPHREY. Could I just interrupt to say that in the hearing that we held, that the subcommittee held in Minneapolis, Minn., when was that—in June, June 2, we had a series of witnesses—we had a dozen or more witnesses, and without exception they were for a mandatory allocation program then, including railroads, utilities, airport operators, farmers' organizations, labor consumers, mayors, and other municipal and county officials.

The record, as you have indicated here by the vote in the Senate on the Jackson bill, of which I was a cosponsor in that bill, and I introduced one of the first bills on mandatory allocations back in April of this year, and you know I didn't even get the courtesy of rejection, much less of any approval on it from the administration.

That support for mandatory controls has mounted by the week, by the day, by the week, and particularly as many of these independent, I noticed that the number of independent dealers that you refer to in your testimony that have been liquidated——

Mr. WHITE. Over 2,000.

Chairman HUMPHREY. Over 2,000 independent businessmen in this country, and it happens to be that my State, Mr. White, has suffered

more percentagewise than any State in the Union. We have lost over 300 in the State of Minnesota.

Mr. WHITE. Well, that may I say is one of the features of a mandatory allocation program as distinguished from a volnutary program because somebody who has a governmental responsibility will be making some decisions. They may be tough and they may even be wrong, but right now decisions must be made. Maybe a 5-percent shortfall doesn't sound so terrible right now. However, it sounds pretty terrible to those people who have an inordinate amount of that national 5-percent shortfall in their own areas.

New England, for example, and the upper Middle West are prime examples.

Chairman HUMPHREY. We are the two areas that seem to be hit the hardest by this.

Mr. WHITE. You know the story, of course, Mr. Chairman, about the 6-foot economist who drowned in a lake whose average depth was 4.2 feet. You know, those averages really don't help you a great deal sometimes. I think we need somebody making decisions who has a larger constituency and responsibility to the public.

In testimony before the Oil Policy Committee, I recall an experience that took place in Attorney General Kennedy's office during the civil rights discussions in 1963.

The Attorney General had called to his office a number of people who either owned or dominated chainstore operations in the Southern States. These were northeasterners for the most part. He said to them: "Why don't you people who have the lunch counters, the bowling alleys, the theaters, and the hotels, why don't you take the lead in eliminating what you know to be terrible—this great discrimination in public accommodations that we have in this country." One of the gentlemen said to the Attorney General: "Mr. Attorney General, look what you are asking us to do. You are saying that we, who basically are outsiders, should go into the South and tell them what they are to do. First of all, I am not sure that that is the right thing for us to do, though I agree with you on what ought to be the national objective. Second, what about my stockholders? What if nobody else follows where we lead, and I go bankrupt, or my company has losses?" He said, "I'll tell you what you do. You support a requirement, in legislation if necessary, that applies across the board to everybody uniformly. Then I will support that because I can do it. I can't get out ahead and run the risk of taking the lead while at the same time being true to my responsibility as a corporate executive." The Attorney General said: "No, by God, you're right." You know what followed, Senator, because you were right there. We had legislation that applied equally, nobody could say that they had to run the risk alone. So I say, why should we, the people of this country ask the president of Gulf Oil, or Mobil, or Texaco to voluntarily take some action that may be inimicable to the interest of their stockholders? Why should he? He'll be out of a job, perhaps, if he takes that lead and nobody else does for Exxon or other companies. I think that the Government has a responsibility, in short, to face up to a problem, to require that the laws be as uniform and as equitable as possible. This ought to be done right now. I don't know whether you or I ought to engage in much discussion. I think we agree. We don't have the right parties here at

the moment to have them defend their inaction, but I hope, Senator, that you will be able, with your eloquence, to nail them, and get some action.

Chairman HUMPHREY. Might I say that every witness that we have had here, Mr. White, from the administration, with the exception of the top one, we get Mr. Ligon, we get Mr. Simon, we get people that are down in the echelon that have to deal with the problems day by day, individual problems, and they all privately or even publicly tell you that we have got to have a mandatory allocation program. But somehow or another there is a decision made at the Presidential level or at the Cabinet level or at the level of Mr. Love's office that maybe we can wait a little longer.

Now, my feeling is, and I repeat it again for the record, that even if we put in the mandatory allocation program, it is going to take some time to refine it, and that is why the delay is so critical, but we can't as Governor Anderson indicated here from our State of Minnesota, and we are not alone, it is not just Minnesota, it is Wisconsin, it is Michigan, it is upper New York, it is many of the New England States, it is Montana, it is all across the Rocky Mountains, it is very cold in the winter.

We cannot afford to have some experimentation going on about allocations in the middle of December. We need this mandatory allocations program to be put into effect with some time for debugging it before its effective date so that we are prepared to get some action, and I repeat it again because there is always—I remember one thing around here and you have been in government a long time—there is always somebody in the room that is taking the message back and I want to be sure that if they did not get it the first time they get it the second time, because we are going to be on their back, day in and day out, until this is done.

Mr. WHITE. Well, there are some political cynics, Mr. Chairman, who believe that the decision has been based on strict politics. Let the Congress bear the burden for having adopted this, and if it goes badly then the burden will have not been the administration's.

I have served in an administration that was anxious to face up to its responsibilities. I don't know that we did everything right, and I'm sure that we didn't, but at least we faced up to our responsibilities. It strikes me that we are in a situation, where according to the staff's study prepared for this subcommittee, the question is not whether there is going to be a shortage, but how severe, and that's a function of the weather. Nobody can tell us how cold it is going to be this winter, but even if it is just a mild winter we are in trouble. If it is a severe winter we are in deeper trouble. For the Government to hope that everything will be all right, or to base its policy on the premise that we have a mild winter, is irresponsible.

Quickly, let me talk about another principle that is implicit, and I could not have thought of a better illustration than the one you posed to Mr. Dunlop. It has to do with the manner in which people who are operating businesses for a profit have found themselves compelled to do things.

When somebody takes heating oil from the United States, sends it abroad to Rotterdam, to change its character and bring it back as an import, I think we can almost all agree that this is unpatriotic, anti-good sense, good judgment, and contrary to the best interest of the

consumers. Furthermore, I don't think that the answer is to throw our hands up and say: "My God, isn't it terrible that people do things like that!"

The Federal Government has some enormous strengths available to it. I don't know if we can legislate rapidly enough, but Presidents can respond rather quickly when they want to and when they need to, and when they have got good reason to do so.

The President recently adopted an Executive order which said that those people who do not comply with the letter and the spirit of the antipollution requirements are going to be penalized in terms of Government bids. I don't know how effective it is, but conceptually it is fine. I hope it will be administered—toughly administered.

By the same token, the United States—the people of the United States—owns some very valuable resources. We own oil and gas deposits in the Gulf of Mexico, and the Pacific, and the Atlantic. The Government is holding them in trust for us, all of us. We take those properties, and by lease, where people bid on them, give people the right to go out and exploit the resources that are there. That may be a reasonable approach, but if we are going to let somebody do that, we ought to be able to impose some conditions.

Why can't we insist that anybody who wants to get on that bidding list has to agree to allocate the fruits of that effort fairly, in a manner that will foster competition, at least as much competition as we can get in this country?

Let them be required to give all of their attention to an allocation procedure that will keep the independent refineries operating, because that is a national policy, assuming we can reach a national policy.

The President recently, but certainly belatedly, abolished the oil import program, through his Executive order. President Eisenhower started it with an Executive order and President Nixon stopped it with an Executive order. In doing so, however, import fees were imposed. According to President Nixon those fees will be waived up to a certain volume level.

Well, now, we are talking about a savings to oil companies of import fees of hundreds of millions of dollars a year, and that is very valuable. Why can't we say as a precondition to having those fees waived that they have got to agree, when they import crude oil and petroleum products into this country, that they will be distributed in a fashion that both the Federal Government and Congress believe is suitable.

And these leases we talk about, we can tighten them, we can get things done the way the Nation wants. There is no other industrial nation that is as helpless as we when it comes to dealing with a critical industry like the energy industry.

I am not an advocate of nationalizing the industry. I don't even think I'd go as far as others who have suggested that maybe we ought to make the oil companies public utilities.

Today, may I say, Mr. Chairman, nobody can come to the president of an oil company or petroleum company and say, you have got a responsibility to devote x percent of your drilling to the United States. We just don't have that right. You can say, however, that if you will do that, we can give you some kind of a tax incentive. But we can't tell them flatly to do that, though in other countries they are told what to do.

I don't think that we're there yet, but we should be able to effectively use the muscle we have as a nation. Additionally, I have another proposal.

Chairman HUMPHREY. By the way, I notice that Norwegians recently, in opening up certain lands, off shore for drilling, have laid down some mighty tough regulations insofar as public purposes are concerned in Norway, not only in terms of the royalties—that is, the sharing of the profits and so on—but the requirements for the nation.

In other words, they are not going to be able to send it all out. They are insisting that some of the oil be maintained, some of it, or even—I do not know what companies, but some of our big multinational companies, that may be doing the drilling and the exploration and development, that when they get that contract, or when they have signed up, they have to perform certain duties for the nation or the state of Norway as well as to pay their taxes and pay their royalties.

Mr. WHITE. Well, I'm not sure I agree with everything that Al Capone said, but he did have one line, Senator, which you may remember. He said: "You can get further with a kind word and a gun than you can with a kind word alone."

Well, we've got some guns in this country, and it is ridiculous for us to sit here, like a pitiful helpless giant, unable to do anything. We can do some things. That brings us to a second suggestion that I would like to urge.

I urge the creation of a U.S. Government-owned fuels corporation.

This would be a corporation whose primary purpose would be the exploration for oil and gas deposits on public lands. We don't have to do all of the exploring, but let's do a small fraction of it. Let us be able to have a corporation that will make its decisions based not upon whether they maximize profit, but whether they are in the national interest.

One of the great frustrations I had, and I believe almost all of my successors in Government have too, is the absolute paucity of accurate, complete data.

Industry right now, the petroleum industry, is being sued to produce data for the Federal Trade Commission. Now, this is a tough issue, but I can tell you that if the U.S. Government is involved in producing oil and gas, then we will know how much it costs, because then it will be yours and mine and the public's.

The United Kingdom went into a partnership with a number of major world petroleum companies. When the companies found gas in the North Sea, the question was how much would the people of the United Kingdom pay for that gas when they purchased it to use in their homes. The British Gas Council fixed the price, and their partners in the exploration and production said the price was too low. The head of the British Gas Council said, "No, it isn't too low, because I know how much it costs us to produce that gas, because we're partners in it," and that ended the argument.

He had a vital requirement, information, and I would expect our Government corporation to produce a great deal of usable information. TVA served as a very——

Chairman HUMPHREY. By the way, we introduced some legislation that relates to the inventory, for example, of what the natural gas and oil resources are. In trying to update some of our statistical evidence—

but I agree that our present procedures are totally inadequate—we rely entirely upon the estimates of private industry, and for tax purposes those estimates are frequently way understated or overstated, whatever might be the need at the time, and I think it is just not in the public interest to permit this sort of thing to go on.

I am deeply interested in your proposal. I have read about it before, and I am pleased that you brought it out in your prepared statement here, as well as in your oral statement.

Mr. WHITE. The drafting of it, as you can appreciate, is very difficult. It is complex, and we are anxious to have it drafted as rapidly as possible. We hope that it will have a fair hearing. The Senate Commerce Committee is scheduling hearings on a whole range of energy and natural gas issues, starting October 10, and I hope that this will be one of the items that will be thoroughly considered by the committee.

There are a couple of other items I would like to touch upon briefly, if I may, and then retire gracefully.

One is the concept of the demand side. We have spent a lot of time focusing on the supply side, but the demand, or conservation side, is quite critical and quite essential, and in this country we have turned the corner probably a year and a half ago.

It is no longer immoral or obscene for electric utilities to advertise that people should use less energy. Instead of trying to sell its appliances, many of them are wisely suggesting we ought to use our energy better.

In Michigan, the Michigan Public Service Commission is doing two things. It authorized distribution companies in the State to participate with homeowners in increasing the insulation of their homes in order to reduce the use of natural gas.

Additionally, the Commission is either considering or has recently adopted another rule which will not permit any of the gas utilities subject to their jurisdiction to attach for new service any home that does not meet minimum insulation requirements.

This is another measure that the President could take. Under the present FHA regulation, only 1½ inches of ceiling insulation is required. It is demonstrable that 6 inches will cut the consumption of energy by as much as 25 percent, and a more conservative estimate is 15 percent. Well, the FHA requirement ought to be changed in order to cut down the consumption of energy.

You, yourself, Mr. Chairman, are sort of a semiexpert on this. I remember when I bought my house from you, you told me about the storm windows you had installed, and I notice you keep reminding me about how efficient those storm windows in my home are. I don't know if it has actually cut down my bill significantly, but even a little bit is helpful. I think we ought to insist, as a national policy, that our energy resources be used much more efficiently, much more wisely. I don't think it is enough for the President to merely exhort us to conserve energy, he must take some definite measures. We need some tough positive actions.

The question was put to Mr. Dunlop, while you were out, about a tax on gasoline for automobiles. I think that is going to come. We are just going to have to decide that some painful, disagreeable decisions must be reached We just don't have energy to use in the same way we had previously.

Chairman HUMPHREY. You see, I don't really believe—let me back up. One of the reasons I brought Jack Bridges here today was to be able to put into proper perspective what the energy crisis is today, and what it is for tomorrow, and when I say tomorrow, 10 years, 20 years, from now, because until we begin to understand the depth of the problem, its complexity and its seriousness, we are going to just tinker around, we are not really going to be doing anything, and I think the American people just have to wake up to the fact that we are in a critical, serious, almost disastrous situation. If we just continue to go on as we are without doing the things that need to be done, the automobile industry, great industry that it is, this year is producing big or bigger cars than it produced last year, and they consume our fuel. And it isn't just because of the environmental gadgets that are on there, they weigh more. They are longer wheelbase; some of them have got more horsepower. I have talked to dealers at home, and I remember I was in one particular company and we were talking about the new cars that were coming out, and he said, "Can you imagine this car is going to have 50 more horsepower this year than it had last year," and I said, "Well, does anybody consult you?" and he said, "No, the engineers in the big companies just make them and they send them out, no regard at all to what is called fuel shortage." And people buy them, of course. People will buy them.

I think, as you have said, the President has got to do more than exhort. First of all, exhortations are not very good. That is No. 1. Second of all, what they say is, get rid of the environmental standards, let us remove these; the easy way out is to back up and go back into the mess we were rather than coming down with specifics. You know, you cannot call the Governors, you can't call on the Civil Defense directors, you can't call on the contractors, you can't call on the building trades, you can't call on the manufacturers, and as President you can say look, we have got an emergency, this is what has to be done, I am asking certain offices here, the Office of Emergency Preparedness, in this country for example, or whatever office it is to prepare a series of conservation recommendations that we are going to issue, and we are going to ask them to be implemented, and if they do not do them voluntarily, we are going to do them through regulation or through law. But we do not get any of that, what we get is well, it is tough, and this is the whole problem.

We have been grinding at this old saw here just for a long time, we have got to keep at it.

I want you to tell us a little bit about this natural gas business, because I notice it in your testimony just momentarily here, just a little bit. No one knows more about the regulation of this problem than you, and what its effect is on supply.

Mr. WHITE. I thought for a moment you were never going to ask, Mr. Chairman. I would have been disappointed.

Chairman HUMPHREY. No, this is a very critical one.

Mr. WHITE. There is a big debate coming up in the Congress, no question about it, and my view is that there ought to be debate. I don't think that the Congress ought to reach a decision on regulating or not regulating natural gas by default. I think one of the great difficulties that the industry faces at the moment is they are in a period of uncertainty, they don't know what is going to happen.

The Federal Power Commission is trying by various ways to reassure them that they are going to get more money. It is very difficult for industry to make the decision to sell now or to wait, because around the corner tomorrow might even be that great golden day called deregulation. I happen to be opposed at this point of time to any bills deregulating natural gas—both old gas and new gas. However, I don't think that it would be in the interest of groups that I represent to try to block congressional consideration of these bills. The issues ought to be discussed openly.

I think that the Congress has to tell the industry what the ground rules are so that they can go on about their business. They make economic judgments. If you have natural gas, you can calculate rather easily how much it costs you to hold it and wait for that day when you can get into the market.

Last Friday, the Federal Power Commission came out with what I thought had to be the prize winner in terms of the most arrogant piece of legislation by administrative agencies that I've ever seen. They have suspended for 180 days the impact of the Natural Gas Act in terms of the control of prices at the wellhead.

That order, which came out Friday afternoon, was effective Friday. There were no hearings on it; there was no proposal for comment; there was no opportunity for anyone to say anything about it, until it came out. That in itself is fairly bizarre, but there is more. The order provides that they will reconsider how this experiment has worked in March of next year, March 15, 1974. Additionally, if anybody wants to comment, they cannot do so until January 15 of next year. In the meantime, there is no regulation now. All the gas that the public wants to buy from the producer is not only free of regulation, but it is not committed or dedicated to the interstate market. Furthermore, there is nothing that would prohibit an additional 6-month extension after the first 6-month extension.

I know that our organization, the Consumer Federation of America, and others—the American Public Gas Association, the American Public Power Association, and very significantly, the U.S. Conference of Mayors—will sue the Federal Power Commission in court. I also believe that there will be still other groups that will sue the Federal Power Commission.

The point is that this is a period where the Congress really ought to say what it thinks. If it elects, over objections of people such as myself to deregulate, let it do so now. Let Congress make the rules as to what ought to be. However, I do have strong views on the subject. I think this is exactly the wrong time to deregulate. I own a gas furnace, I own a gas stove, so I am a prisoner of whatever the Washington Gas Light Co. gives to me. I can't very comfortably and conveniently switch to an oil burner or a coal burner or electric heat or an electric stove just like that. It takes a big investment, and I am not alone in my dilemma. My problem is multiplied by tens of millions of people, 43, 50 100 million people across the country.

I think you should focus on one premise, which may be the heart of the matter, and that is whether or not the natural gas industry is oligopolistic in character. You will see that if the industry is oligopolistic that deregulation would be a travestry. To take all of us, consumers, and put us at the mercy of people who have control over an essential product such as natural gas would be a crime.

Since there is no competition, we believe that regulation is essential. Regulation is intended to be a substitute for competition, as imperfect as present regulation is. It could be improved, however. Nobody believes that everything is just the way it ought to be under regulation. There are some problems. But the point is that we ought to pay for natural gas what it costs to produce that gas, plus a reasonable return to the people who are involved in that business.

I don't think we ought to pay windfall profits simply because there is a scarce commodity that we need. We have to be protected by regulation.

One of the big problems is the use to which this fuel is being put. I think it is tragic that in certain parts of the country, Oklahoma and Louisiana for example, natural gas is being burned to generate electricity. I am sure there are homes and housing units in Minneapolis that can't be attached because there is not enough natural gas for heating the home, housing, or parking units.

Well, one of the reasons is because there is a distinction in the 1938 Natural Gas Act between interstate and intrastate gas. I have believed for a long time that there should be no distinction. I was very pleased last year when Senator Griffin introduced legislation which would eliminate that distinction between intrastate and interstate gas. They have to be treated the same. Natural gas is a natural resource and it ought to be handled on a uniform basis across the country.

If it is not to be regulated, which I happen to disagree with, let it not be regulated. If it is to be regulated, it ought to be both intrastate and interstate regulation. This is another legislative item that I hope the Congress will face up to when the Commerce Committee gets going with its hearing next month.

Chairman HUMPHREY. We have no real positive evidence, do we, that even if you increase the price of natural gas, that you would get more supply?

Mr. WHITE. That is absolutely correct. This past Tuesday, in Seattle, I participated in a seminar of the State regulatory agencies. The newest member of the Federal Power Commission, Commissioner Springer, was there. He was talking about the issue of regulation, and he said: "We really hope that if there is to be a deregulation that we will get more natural gas."

I have got to tell you, Senator, hoping isn't good enough. I don't think that that is where we're at. We have got to do more than simply hope. That is one of the reasons why I have suggested the elimination of that distinction between intrastate and interstate gas. We must also get somebody into this field who is motivated by national need rather than by only maximizing profit.

Chairman HUMPHREY. I gather that you would agree with me that when last weekend some of the FPC economists alleged that Government spokesmen are suggesting that higher gas prices are now necessary, that this might very well contribute to the gas shortage by convincing—now I'm speaking now of natural gas—the producers that by holding back on the gas they can get a higher price for it.

Do you think that is true?

Mr. WHITE. I certainly do, and I will even go a step further. I have a hunch that if you or I happened to wake up one morning and found that we were in charge of a natural gas division of Texaco we

might do the same thing. Our jobs would depend on the profit-and-loss statements. That's how we would be measured. We are not asked, when we take over those jobs, to do something good for the American public. We've got stockholders to answer to.

I had a meeting one time with a senior vice president of a petroleum company. I was giving him my usual line, beating him on the head about why he wasn't doing the right things, and about how his public image that used to be zero, now was minus. I talked to him about the preservation of the independent refineries and he said, "Listen, the trouble with people like you is you don't understand the free enterprise system. We are sellers and this is a seller's market. I have searched the Bible, the Constitution, and our corporate charter, and there is no where that says we have got to preserve our competition." I then said, "Do you know what is going to happen? The Government is going to get in your business and you are going to say, 'I wonder why those guys are in our business'." I understand their problem, and what it really boils down to is that Congress, as our policymaking mechanism in this society, has got to face up to its responsibility. I have a hunch that left to their own devices, it is going to be impossible for the industry to meet the needs of this country.

I know there will be legitimate debates and disagreements over what to do, but I don't think that there can be debate any longer over whether we've got to do something.

Our energy problems are really coming up on us very fast. We are already late, and should have made some of these major decisions long ago, because of the leadtimes that are involved.

Chairman HUMPHREY. Just a couple of quick questions here. Would you comment on the means by which the FPC is now rationing natural gas, what indirect means they use to its customers, and is there any collaboration that you know of between FPC and the oil allocation officials?

Mr. WHITE. To the first part of the question, I think they are trying to establish a sense of priorities because natural gas is a premium fuel. It has very many aspects and uses—it is flexible and desirable in many, many different regards, and I do think it makes sense to establish some priorities. As far as I can tell, and I have not looked at this carefully, I think the FPC has beeen wise in establishing priorities for natural gas usage.

I find so little to commend the FPC about these days so I am delighted to find something that I can say is right. And that is a thicket. Poor Mr. Dunlop's got a tough job. Actually, anybody that gets into regulation has got a tough job. Where we are at now is: when there isn't enough of the necessities to go around how do you decide who gets what? Do you allow price to be the determining factor? We were advised by the Lieutenant Governor of Wisconsin, for example, who had a number of the petroleum companies operating in his State, that those companies found a solution to the shortage. They advocate that people who do not pay their bills be cut off. Well, I can't support the idea of carrying forever those people who don't pay their bills, but who actually don't pay their bills? They are the poor and the elderly in our society, and they are the ones in a tough spot. I don't think that it is quite good enough in the year 1973 to say that the criteria for whether or not you get your service will be based upon

whether or not you can pay your bill promptly. That is not the solution.

I think we keep returning, Mr. Chairman, to the dominant theme. The Federal Government has got a responsibility to the people in this country, and it darn well better face up to it.

Chairman HUMPHREY. Do you think we'll have rationing of heating oil this winter?

Mr. WHITE. I don't think we have to to have rationing. I think we have to have allocation. Allocation will result in, first of all, a sectional distribution, which I know you are interested in, and ought to be interested in. I think that would help.

We got through the summer in spite of the gasoline shortage partly because refiners did more, but also because people began to change their habits a little bit. A lot of people who would have gone motoring didn't because they saw on TV how so many got stranded in Denver. I've got nothing against Denver, it's a nice place to be stranded, but not when you're traveling somewhere else. There is a change in national perceptions about what we have to do with energy. It looks like a lot of people could be cold this winter, and now's the time for the President to use his leadership. We want our Presidents to lead and to be strong and vigorous. I would hope that President Nixon would take some initiative here. I think we can get through the winter without actual rationing of heating oil. However, I would make sure that the apparatus for rationing is ready to go, because if we have any bad luck we are going to need it.

Chairman HUMPHREY. Mr. White, we want to thank you very much. I could spend a lot of time visiting with you about this because you are a knowledgeable man and very helpful. Your testimony is welcomed, and your entire prepared statement will be placed in the record at this point.

[The prepared statement of Mr. White follows:]

PREPARED STATEMENT OF LEE C. WHITE

My name is Lee C. White, and I am here today in my capacity as Chairman of the Energy Policy Task Force of the Consumer Federation of America. Our Task Force currently has 21 member organizations (Appendix A), and our expressed purpose is to ensure that the consumers' views are expressed and considered in the energy policy debates currently taking place publicly and, in particular, within the Congress. We recognize that there is no necessary single "consumer interest" in any of the numerous issues that comprise the energy policy debates; nevertheless, we have undertaken to do the best job possible in assessing and stating the views of the consuming public and, as the broad base of our membership suggests, we do indirectly represent milions of Americans.

Obviously, the consumers in this country are deeply concerned by the problems resulting from the shortages of fuel in this country. We have come through a summer where the consequences were somewhat milder than had been anticipated and with relatively little national inconvenience. Nevertheless, those people who were stranded because of their inability to get gasoline, especially in the Mountain States, may not share our general view of thankfulness for the low level of inconvenience. In part, this was the result of a decision by the integrated petroleum companies to increase the runs of their refineries and to emphasize the production of gasoline. It may be worth noting that this decision followed some 2 or 3 weeks of national outrage in the early part of the summer. Another factor that is more difficult to define, but which certainly had some significance was the accumulative effect of people making different decisions about how they would travel and whether they would travel.

Putting that all aside, however, the question that we now face is the coming winter heating season that is very nearly upon us. The staff study prepared for

the Subcommittee on Consumer Economics makes it clear that we are going to have a shortage. The only open question is how severe and how pervasive it will be which is a direct function of the coldness of the winter.

We appreciate the opportunity to appear in this hearing to indicate some of the strong views that we hold about the problem and some of the solutions we think ought to be considered.

Congress authorized the President to adopt a mandatory fuels allocation program last April, but thus far the President has refused to exercise that authority, choosing instead to rely upon voluntary programs. The Task Force that I represent here today believes that this is the wrong approach and continues to urge, in every possible forum and at every possible time, that the mandatory program be put into effect immediately. The 2,000 independent gasoline stations that have gone out of existence in the year 1973 (which is not over yet) will find little comfort in the Administration's reliance upon voluntary action by the major integrated petroleum companies to allocate their crude oil and finished petroleum products so as to ensure continuation of a competitive situation between them and the independent refiners and marketers of petroleum products. In testimony before the Administration's Oil Policy Committee, our Task Force suggested that a mandatory program ought to rest on humane consideration for major integrated oil company executives. It is simply unnatural to expect industry leaders, who have come to positions of power through decades of having their efforts measured by their annual profit and loss statements, make decisions on a voluntary basis that are contrary to the best interests of their stockholders even through those decisions would better serve a larger national purpose. Put differently, the point is that if the Administration knows what it wants and will adopt rules that are uniform and as equitable as possible, oil company executives should be relieved to be told what they must do without detriment to their relative position with regard to other oil companies and thereby be spared the difficult problem of choosing between their stockholders and the company's customers which, of course, are the consumers of the country.

As painful as it may be, we must acknowledge that some changes are required. I can understand, although I cannot share, the view expressed by the President, his Administration and by some agencies such as the Federal Power Commission, that the solution should rest on "freeing" the energy industries from Government shackles. I believe otherwise.

For example, the President's thesis, expressed in formal messages, a televised press conference and a recent briefing of the press following a high-level Administration meeting on energy issues is that we should deregulate the wellhead price of natural gas for newly discovered gas. As I see it, the same characteristics of the natural gas industry which prompted the Congress to adopt the Natural Gas Act in 1938 and the Supreme Court's *Phillips* decision in 1954, exist today—in fact, the need to provide consumer protection is far greater today. The principal elements arguing against decontrol of wellhead prices—either for all gas or only for newly discovered gas—are the following: there is absolutely no credible evidence indicating the additional volumes of gas that would be produced and available for any particular price whether it is 35¢ per thousand cubic feet, 50¢, 75¢, $1.00 or $2.00, and, indeed, no natural gas producer, that I am aware of, has even been willing to make a commitment to increased investment in exploration and development if prices are increased or if controls are removed; if the ability to pay higher prices for natural gas is the only test to be employed, residential consumers are at the mercy of the producer with almost no ability to convert to other fuels; and the basic function of regulation is to prevent windfalls and unconscionable profits by those in positions of economic strength to exact whatever prices they choose to fix and, in this instance, the producing industry has the economic power, the captive customer and an essential product. A far more realistic approach would be to include intrastate gas within the price-regulating responsibilities of the FPC; natural gas is a national resource that should be used for the highest and best purposes and all that this nation possesses should be subject to the same standards and regulations. It makes no sense for natural gas to be burned to heat boilers in Oklahoma or Louisiana simply because it happens to be located there when there are families elsewhere in the United States who cannot attach new housing units to gas distribution system because there is not enough gas for those purposes.

As suggested earlier, we believe the President has been wrong in his refusal to exercise the authority already granted him on last April 30 by the Economic Stabilization Act to adopt a mandatory fuels allocation program. But in addition,

the Federal Government should use its position, its power, its prerogatives, its muscle, if you will, to achieve appropriate national goals. It should tighten up its leasing requirements, and it should use its considerable leverage in determining who should be permitted to bid for leases on Federal lands. To me, it makes sense for the Federal Government to impose conditions for permitting companies to bid on Federal leases that, in the Government's judgment, will add to our domestic supplies of oil and natural gas; additionally, how the petroleum products resulting from those efforts are used should also be the subject of conditions laid down in advance for participating in such lease sales. For example, there could be a condition that a certain percentage of any oil found on Federal lands must be made available to independent refiners on a specified formula or allocation basis. Another condition could specify that a certain percentage of profits realized from gas and oil on Federal lands would be committed to exploring for oil and gas elsewhere in the United States. Under the new program announced in April by the President for handling crude oil and finished petroleum products imported into this country from abroad, the Administration has granted waivers of certain import fees; there are valuable rights and easily calculated into hundreds of millions of dollars annually. It seems to me perfectly reasonable to require any company which imports crude oil or finished petroleum products and which takes advantage of the fee waiver, to agree ahead of time to allocate those products on a basis that the Government determines is equitable and uniform and which is designed to preserve and promote competition. In short, the Federal Government ought to use the strengths available to it to achieve national objectives.

Most of us have a great reluctance to take over the petroleum producing industry, either by way of nationalizing it or by way of converting it to public utility status. Although this may be understandable, it is certainly frustrating when the industry is not properly meeting national needs. In that set of circumstances, the Federal Government must do more than simply request an industry as essential to this nation as the petroleum industry is to do the right thing—it should use every ounce of muscle it possesses to see to it that national objectives and requirements are met.

An idea which has been receiving increasing attention and interest is the establishment of a United States Government-owned corporation which would be given the primary mission of exploring for oil and gas deposits on public lands. Even though nationalization and imposing public utility status on the petroleum industry may not be appropriate at this time, it is appropriate for the Federal Government to consider and to take other actions and certainly one of them is to create a corporation which will be motivated not exclusively by the profit motive, but also by meeting national requirements. Such a government corporation would not pre-empt all publicly owned lands, but would have a fraction reserved for it. It should be as comparable to a privately owned corporation as possible and should be specially charged with operating in a manner that minimizes environmental damage and which ensures competition among refiners and distributors of petroleum products including natural gas. One of the great frustrations for government regulators has been the paucity of information relating to production costs—a government-owned corporation would obviously make that data available to the public and afford some means of measuring production costs of the privately operated sector.

The TVA experiment has adequately demonstrated the ability of the Federal Government to operate efficiently in the energy field. We would expect its counterpart in the oil and gas producing business to achieve the same level of efficient operation. We hope efforts to translate this concept into legislation will proceed rapidly and that appropriate Congressional committees will have the opportunity to evaluate the proposal soon.

We believe the impending crisis in heating oil is primarily a crisis of distribution rather than of supply. The figures released last week by Senator Ribicoff and which appear in the Congressional Record for September 12, 1973, are revealing. Oil companies in the east which produce No. 2 oil have 14% more stock on hand than they did last year—79.4 million barrels of No. 2 oil as opposed to 69.5 million barrels at this time last year. This year's stock is only .2 million barrels below the 1971 level. At present these producers have their storage tanks filled to 82% of capacity.

The independent distributors, however, have stocks amounting to only 25% of their storage capacity—3.9 million barrels. Last year at this time the independents had 7.0 million barrels in storage.

So while distributors are down 3.1 million barrels, producers are up 9.9 million barrels. What we are seeing in the heating fuel market is a rerun of what we saw

in the gasoline market over the spring and summer: The major oil companies experience little difficulty while independent distributors and retailers face constrictions in supply far out of proportion to the total industry-wide deficits.

The disparity between independents and majors is also evident at the refinery level and sheds further light on the heating fuel problem. Figures in last week's Oil and Gas Journal showed that independent refineries operated over this summer at 88% of capacity. The major refineries, however, have been operating at "record" levels of 96% or 97% of capacity. These differences, of course, reflect the greater access of the majors to crude oil.

A crisis in heating fuel this winter can be averted or ameliorated significantly if the immediate problem of supply is solved. I don't want to belittle the difficulty that is involved there. I'm aware of the frustrations the Congress has encountered in trying to get a game plan out of the Administration. As indicated earlier, we strongly support a mandatory allocation program. The time for such steps is long overdue. The voluntary program was a failure.

Now we are into the heating fuel season when the role of the independent is even more critical. If the independent gasoline retailer ran out of gas or went out of business, you could almost always find a major from whom to buy your gas. Although this was a phenomenon, we could live with its adverse anticompetitive and costly effects should not be minimized. But if independent heating fuel suppliers run short or go out of business, we face even greater problems because in many areas of the country, the majors simply are not in a position to fill these needs for customers of the independents even for one season. Consequently, a mandatory allocation program is not merely desirable as was the case this summer, it is now imperative.

As Congress continues to apply pressure for mandatory allocations, I would urge you, particularly the members of the House, to consider Senator Moss' amendment to Senator Jackson's allocation bill which passed the Senate in June. This is the so-called dealer/jobber's day in court provision under which any retailer or distributor who is cut back on his supply to a greater extent than others in his market area, may go to the nearest Federal District Court and, on an expedited basis, get an injunction ordering his supplier to treat him equally. This private right of action would be an important and useful supplement to the administration of an allocation plan. The mere presence on the books of such a provision would go a long way to keep the majors complying fully with an allocation program. We recognize that enforcement is going to be an enormous task for the Administration, and we also have to face the fact that an Administration that has been so resistant to an effective allocation program may be less than vigorous in enforcing any mandatory program which Congress enacts.

I would also like to say a word about the Clean Air Act in relation to the fuel crisis. I agree with the point made by Senator Jackson in his letter to the President last week that an effective mandatory allocation program may make roll-backs in air quality standards unnecessary. An allocation program should include provisions for optimal distribution of low sulphur fuels to areas that are in need of them to prevent deterioration of air quality to a dangerous level in terms of health and safety. I am encouraged to see that EPA Administrator Russell Train believes that any compromises in air quality should be linked to a mandatory allocation program to keep them to absolutely minimum levels.

It is important that we not allow the crisis psychology that permeates thinking about energy problems or oil company advertising which fuels that psychology to cloud our thinking about matters of public health and safety. And that's what the Clean Air Act is—more a matter of health and safety than of aesthetics or environment. I am aware that doctors and scientists are not yet ready to delineate the precise links between air pollution and heart, lung and other diseases. Hopefully, the current National Science Foundation study will shed new light in this area. But doctors and scientists do agree that there is some connection. Certainly, the rise in emergency cases and deaths reported in the Washington and New York hospitals during the recent prolonged pollution alert puts prudent men on notice that the quality of our air has a very real effect—if not completely understood—on our health. I'm not a doctor, but I am a lawyer, and I say that this situation places the burden of proof on those who suggest that we retreat from air quality standards we have already established. The proponents of the action must prove conclusively that it is safe to roll-back present standards or delay implementing them.

Finally, let me express our hope that the Congress will move promptly, not only on the mandatory fuels allocation legislation, but also to some of the legis-

lative solutions of a longer term character. The $2 billion a year R&D program must be enacted this year. The Congress should examine Natural Gas legislation, and I hope it will explore the idea of creating a government-owned energy corporation to explore for oil and gas. Much has been done now that the problems associated with energy have begun to strike at individuals and industries across the country, but there is a very great deal of work yet remaining for the Congress, the body which sets our national goals and policies in analyzing these complex issues and in adopting the appropriate solutions. Our Task Force will cooperate to the limit of our ability to do so with this Subcommittee and with others engaged in this significant work.

APPENDIX A

MEMBERSHIP OF THE ENERGY POLICY TASK FORCE

American Public Gas Association
American Public Power Association
Consumers Education and Protective Association International
Consumers Union
Cooperative League of the United States
Industrial Union Department of AFL–CIO
International Brotherhood of Electrical Workers
Kansas Municipal Utilities
Lincoln, Nebr., city of
National Farmers Organization
National Farmers Union
National League of Cities
National Rural Electric Cooperative Association
New Populist Action
Northeast Public Power Association
Oil, Chemical & Atomic Workers International Union
Service Employees International Union
Tennessee Valley Public Power Association
United Auto Workers
U.S. Conference of Mayors
Wisconsin State AFL–CIO

Chairman HUMPHREY. Senator Javits is here. You might want to ask Mr. White some questions.

Senator JAVITS. Mr. Chairman, could we ask Mr. White if he would be kind enough to stay with us a few minutes, as my time is very limited; I have a conference on the war powers bill at 2 o'clock.

I would suggest that there is another witness, the mayor of one of the cities of the Chairman's own State waiting. That if Mr. White could be recalled and we could ask Mr. Kenny to sit next to him, I could deal with the matter right now.

Chairman HUMPHREY. Right now?

Senator JAVITS. Within 5 minutes.

Chairman HUMPHREY. Mr. Kenny and Mr. White come up again.

Senator JAVITS. Gentlemen, you have heard Mr. Dunlop.

I have but one question. Is he right or wrong?

He has made a case for treating the price allowability differently than your markup practices. Now, my understanding was that there a number of independent fuel oil dealers in New York that simply could not stay in business unless they had a passthrough, and that as the gasoline side, that the gasoline people simply found the markup which they imposed of 7 cents a gallon, completely unacceptable.

And, that many of them would have to go out of business. Now could you give us, for the record, any statement you wish to buttress the position of each group, and we will press that on Mr. Dunlop as a factor in countering his point which he made here this morning.

Chairman HUMPHREY. Let me say that we have Mr. William F. Kenny III who is here on behalf of the Oil Heat Institute of Long Island, and I gather, Senator Javits, that your question was first directed toward Mr. Kenny and then maybe Mr. White would like to make some commentary.

Senator JAVITS. Well, then that would be all, and then you could call Mr. Kenny when it is time.

Mr. KENNY. I have a rather lengthy statement.

Senator JAVITS. Mr. Kenny, you will have a chance to make your statement, you are here to just answer one question for me, because of my problem.

Chairman HUMPHREY. Then we will come back to you on your statement, you see?

Mr. KENNY. As far as Mr. Dunlop's testimony today is concerned, and also as far as the CLC regulations are concerned, in terms of heating oil dealers and I am not speaking of gasoline, they are disastrous.

I think they are potentially as bad, as far as the energy crisis for heating oil this winter, as any problem with product shortages. The retail heating oil dealer is being asked to eat increases in product costs without being able to pass them on in excess of what his profit margin is before taxes. He was being asked to use a markup back on January 10 when the major oil companies were given May 15. And by his own testimony, Mr. Dunlop said there was a bulge between January and May. The major oil companies are allowed to use May 15, we must go back to January 10.

In addition to which, his reference to the fact that we can now pass on the increased cost of home heating oil that is imported. The increases that we have gotten from the major oil companies in the last month, have not been attributable to increased costs of imported heating oil. They have been attributable to the increased costs of crude, both domestic and foreign, and there is no way we can pass that on.

And this business of taking a look at it in the future is not going to work. Because we have guys that are losing money right now. They have gotten these increases in the last month or so and they are now losing money. And there is no way that they can survive 3 or 4 months of bureaucrats looking at the picture.

And I might add to that, Mr. Dunlop talked about getting figures from us. We gave him those figures. I have those figures there in the record. We gave him those figures. Those figures indicate that we did not contribute to the inflationary pressures during the first 5 or 6 months of this year. In fact, our margins and our markup percentagewise went down. The price of heating oil went up 1.97 percent in 1971 and 3.2 percent in 1972 and 9.4 percent in the first 5 months of 1973, during which we had a 13.6 increase from the major oil companies. Now it doesn't take a M.B.A. from Harvard in economics to figure out that if you have to eat those increases and you cannot pass them on, you are out of business.

Chairman HUMPHREY. We would like to have any statistical information that you have for our record. I think that would be very helpful because we will take the time to take it up with Mr. Dunlop again. That is the purpose of Senator Javits' question.

Senator JAVITS. Will you submit that for the record?

Mr. KENNY. We have submitted it to the Cost of Living Council.

Senator JAVITS. Mr. White, do you have anything to say?

Mr. WHITE. Not too much, just basically that anyone who can be so presumptuous as to try to speak for consumers, wins some and loses some. You cannot always be right. Obviously, some consumers have one interest and some have another interest. And basically, the con-

sumer is interested in the price that he has to pay. I do not think that the consumer wants the retailer to have to lose anything. I think the retailer is entitled to be in business to make a fair profit, and that is going to go all the way back up the chain. In the particular case of the petroleum and fuel products, we are talking about the major integrated petroleum companies for the most part, because they dominate this Nation's petroleum energy. So if there are elements of unfairness, it ought to be pushed all the way back. The burden ought to fall on everybody equally. But I do understand the difficulty that the Cost of Living Council has.

I think the answer is that Mr. Kenny has a good case, just as gasoline stations do. They can demonstrate to us because of the choice of arbitrary dates, that they are having their profit margins sliced as distinguished from going up. They have to have some relief because they are going to go out of business. And nobody, no consumer I know of, believes that the salvation is to squeeze a lot of relatively small middlemen out.

Senator JAVITS. Thank you so much, gentlemen.

Thank you, Mr. Chairman.

Chairman HUMPHREY. Yes, Senator Javits, I want to thank you for coming today under great pressure, I know, of your time.

Senator JAVITS. Thank you.

Chairman HUMPHREY. Mr. White, you are now excused; we thank you very much.

I think the point has to be made at this point in the record, too, because we will take this up with Mr. Dunlop. That is the purpose of this record, that these independent retailers are the source of supply for the people. It does not do any good to talk about the big majors if they are not out there where the people live. It is these independent ones that deliver the fuel oil, put it in the tank, and take care of our heating problems.

Mr. Kenny, you have a prepared statement here. We have kept you a long, long time, but I think that this meeting has all been directed toward many of the things that you are interested in and upon which you commented in your prepared statement.

Now, if you want to, may I suggest that, you might want to place your whole prepared statement in the record as to the feel of it and then you give us some oral commentary here to shorten it up for yourself, because we are aware of what your prepared statement says and it will be given most careful consideration by our full committee and by its staff. And we intend to come to some conclusions out of these hearings; we do not intend to drag it on.

We are not a bureaucracy. This is an action committee.

Please proceed, Mr. Kenny.

STATEMENT OF WILLIAM F. KENNY III ON BEHALF OF THE OIL HEAT INSTITUTE OF LONG ISLAND

Mr. KENNY. I certainly appreciate that, and I will not read the whole prepared statement.

I think that the chairman recognized that we have a No. 2 heating oil shortage, so I will not go into all the statistics that I have indicating that this is so. I would like, though, briefly to give the program of the

Oil Heating Institute of Long Island. I think that it is important to focus on Long Island because that happens to be an area where 90 percent of the heating oil is delivered by independents and where 80 percent of the homes are heated by oil.

I think that the fact that 80 percent of the homes are heated by oil is also very important. It is also the highest percentage of anywhere else in the country.

I would like to say this, that unlike the closing of gasoline stations where the consumer can move down to the next one and buy his gasoline from a major oil company, he cannot do that with heating oil. The heating oil situation is quite different here. It has to be delivered by a number of dealers who have very complex systems involving heavy investments in vehicles. It is not like gasoline.

As far as our program is concerned, very briefly, we are talking about a mandatory allocation of No. 2 heating oil. That is point No. 1. That is based on the concept of 100 percent of what is delivered by the major oil companies' base period. And our base period is July 1, 1972, through June 30, 1973. The major oil companies must deliver those same quantities in the upcoming year. We feel that they have the facilities to do it.

They are talking about increased runs of refineries, and we see no reason why they cannot do it. That is basically point No. 1.

Point No. 2 is that we are against the mandatory program as announced by Governor Love on August 9. It just will not work. It is too complex. It has States' set-asides, which is disastrous. We are looking for something workable. Again, as you said Senator, the time is getting late, so we have to get a plan that will work right away.

We want mandatory allocation to be simple and workable, and we want the Government to call on the expertise of the people in the oil industry at the independent level and at the major oil company level. With all due respect, we just do not believe that the people from outside of the industry can work for the program.

We also feel that utilities must be stopped from burning more and more domestic oil to generate electricity. In 1972, they consumed 2,850 million gallons of home heating oil as compared to 112 million gallons in 1967. Two-thirds of the oil use by utilities goes up the stack as unharnessed energy. And they are continuing to promote the increased use of electricity.

All refineries must be made to switch, immediately, from maximum gasoline to maximum fuel oil production, and not return to maximum gasoline production until this winter's crisis is over and next winter's is prevented.

I think that the Government has to bite the bullet and decide that if we have a hydrocarbon shortage, that they will have to get out there and curtail less essential uses, such as the pleasure driving.

No. 4, Federal, State, county, and local governments must get involved in conservation. Full conservation needs leadership on all levels, and I think that this is what Mr. White said earlier. I think the concept of reinsulation is an important one. For example, if 25 percent of the homes of the country were brought up to proper insulation, we would not have an energy crisis.

We need, from all levels of government, imagination and leadership. For example, how about tax deductions right now for people

who spend money to reinsulate their homes up to proper standards? I mean, we want some imagination in leadership. Things can be done in this area of conservation.

An far as the phase 4 is concerned, I did make a comment earlier and I expressed the figures as far as the heating oil dealer is concerned. I might say this, that apparently the CLC has decided that the home heating oil dealer has gouged the public, in 1973. Based on the figures I have in this prepared statement here, and also the figures that were submitted to the CLC, this is a totally erroneous premise. And I would suppose that if the premise that the regulations are based on is fallacious, it almost follows that the regulations themselves must be ruinous and discriminatory; and they are, they are incredibly and unbelievably so.

They are ruinous because it does not take an economics M.B.A. to figure out that if product costs and other costs increase as they are increasing, and they exceed the profit margin before taxes of the business involved, it will not be long before the business is out of business.

We are not talking about what might happen, we are talking about what has happened, and is happening. Major oil companies and independent wholesalers have already increased prices to retailers in amounts of up to 1.7 cents a gallon, since phase 4 started just a month ago. When you make about 1 penny a gallon before taxes, how can you absorb a 1 to 1½ cents per gallon and stay in business? Phase 4 is grossly discriminatory for the following three reasons: First, all segments of the petroleum industry can pass through all increased product costs. The retailer is forced to absorb all these costs except increased costs resulting from imported No. 2 heating oil. So far, the cost increases from the majors to us have not been from imported heating oil but from increased domestic and foreign crude costs. Second, the rollback of the heating oil markups for the retailer is to January 10, 1973. The majors are allowed to May 15, 1973. The heating oil retailer is thus forced to absorb all operating cost increases since January 10. There is a big bulge in costs between January 10 and May 15. Third, we must have immediate relief, or otherwise we will not be in business to deliver heating oil even if you demand that we get our fair share of oil.

We are not asking for anything more or less than anyone else. Just equitable and reasonable regulations. And what we ask for is in the prepared statement, so I will just go on and summarize the phase 4 problem.

Summarizing the phase 4 problem, we just cannot understand why the independent retailer should be forced to solve, at the risk of his business, the inflationary problems of the international petroleum industry which are dealt with in the boardrooms of major companies, caucuses of oil-packed petroleum ministers, and in policy meetings at the highest levels of government. We don't want anything special or difficult; we will be happy to live with all the regulations imposed on all the retailers. We just don't want to be punished for something that we did not do and have no control over whatsoever.

So, in conclusion, Mr. Chairman, and this is very chopped up, obviously, from what I had in the prepared statement——

Chairman HUMPHREY. Well, the whole prepared statement will be in the record.

Mr. KENNY [continuing]. Unless immediate action is taken to see that more heating oil is put into the system, severe shortages will occur.

Unless phase 4 is immediately modified, there will be few heating oil dealers around to deliver the oil, even if it is made available.

I would like to thank you very much for letting me make this statement today and put the prepared statement in the record. If you have any questions, I will do my best to answer them.

Chairman HUMPHREY. Very quickly, because I want our stenographer, here, to be given some time off.

[The prepared statement of Mr. Kenny follows:]

PREPARED STATEMENT OF WILLIAM F. KENNY III

Mr. CHAIRMAN: I appreciate the opportunity to testify before this committee regarding the outlook for #2 heating oil from the point of view of the retailer. I especially commend the committee for recognizing the need to deal effectively with this very critical situation *now* while it is still warm not *later* when time may have run out.

By way of brief introduction, I represent the Oil Heat Institute of Long Island as Chairman of its Energy Crisis Committee. Long Island consists of the two counties of Nassau and Suffolk, with a population of some 2.7 million people where over 80% of the 670,000 homes are oil heated. Consumption of #2 home heating oil on Long Island in 1972 exceed one billion gallons. To the extent that there are serious problems regarding home heating oil, Long Island is about as good a place as any to focus on because of the high percentage of oil heated homes.

I am also President of Meenan Oil Company, an independent retail heating oil company operaing on Long Island and also in Pennsylvania and New Jersey. I have been in the business for 15 years, following in the footsteps of my father and late grandfather, who founded the company 40 years ago.

Before discussing the problems, I'd like briefly to explain the structure of our industry. Nationally, 75% of the home heating oil is delivered by independent retailers while on Long Island the figure is 90%. Independent retailers buy either from independent wholesalers or major oil companies. Nationally, these retailers depend on independent wholesalers for 25% of their supply and on the majors for 75% while on Long Island, the independent wholesaler accounts for over 50% of oil supplied to retailers. You see that any area depending heavily on independent retailers who in turn depend heavily on independent wholesalers is particularly vulnerable to problems that adversely affect the independent segment of our industry. Long Island is, of course, such an area as is the rest of the Northeast.

On Long Island, we have some 375 retailers who deliver an *average* of about two and a half million gallons per year to an average number of 1500 customers each and who employ, on the average, 9 to 10 people including the owner. In addition to delivering the oil, the retailer provides complete heating system service 24 hours a day, 7 days a week.

We in the home heating oil business in the Northeast, and I assume elsewhere, have two potentially disastrous problems. One is supply and the other is Phase IV. I will treat each separately although they are closely related in many ways.

From the point of view of supply, reliable evidence points to the fact that there will be a critical shortage of No. 2 home heating oil on Long Island and in the entire Northeast this winter.

The evidence is clear. Firstly, a study by the Petroleum Industry Research Foundation, Inc. dated July, 1973, entitled "The Outlook for Distillate Heating Oil in the Winter of 1973–74" states, in part, "If the winter is even slightly colder than normal, if the substitution of distillate fuel oil for curtailed gas supplies is significantly larger than last year, of refinery runs cannot be sustained at an average rate of 92 percent of capacity over the next 9 months or if the level of imports falls 3–4 percent below our projected average volume of 500,000 b/d during the heating season, a shortage could be expected to develop." In addition, recent studies by the staff of this committee and by the Interior Department are even more ominous in their projections and imports since July have not met projected quantities.

While most parts of the nation will feel these shortages, Long Island will be among the hardest hit areas in the country. This is because over 50 percent of the dealers who supply 90 percent of the Island's heating oil are in turn supplied by independent wholesalers who have been severely cut back on supply by the major oil companies.

Secondly, in an attempt to determine the true extent of the shortage Long Island can expect, Oil Heat Institute of Long Island recently launched its second survey of independent heating oil retailers in early August. So far, 144 companies have responded. These dealers indicate they will need a minimum of 473,232,000 gallons of No. 2 oil to serve their customers through the 1973–74 heating season. However, only 61 of these dealers have been given any idea at all by their suppliers of the number of gallons to expect this year. These 61 dealers have been told that of their needs of 236,121,000 gallons, they can expect to get only 139,860,00 gallons creating a 96,261,000 shortfall which is 40 percent. The remaining 83 dealers who responded are simply not sure at this point what their supplies will be.

Thirdly, due to the shortage of natural gas, utilities have cut off supplies to large governmental, industrial and institutional users with the entire burden now being placed on home heating oil. For example, the Long Island Lighting Company has cut off all of its interruptable customers which include state and county buildings, hospitals, etc. from November 1, 1973 through March 31, 1974. This significantly increases the shortfall of home heating oil in our area and, incidentally, Petroleum Research study referred to before did not include increased demand from shutoff interruptable gas customers.

The point of this information is this: Unlike the closing of thousands of independent gasoline stations reecntly in the news, if the independent fuel oil dealers on Long Island or anywhere go out of business because of inability to obtain heating oil, there is no other available means of supply for the consumer. A homeowner finding his friendly neighborhood independent gasoline station closed due to lack of gasoline can simply drive his car around the corner to a station operated by a major oil company. However, a homeowner who finds his friendly independent heating oil dealer out of business due to lack of heating oil has no other alternative. He will go cold. The distribution system is not flexible enough to handle even minor product dislocations and shortages.

In order to deal with the expected shortages, Oil Heat Institute of Long Island has a position which I would like to present and which we believe is both feasible and necessary not only for Long Island and the Northeast, but for the whole country.

1. MANDATORY ALLOCATION OF NO. 2 HEATING OIL

Within ten days, all major oil companies must be required to submit to the Energy Policy Office a list of all 1972 customers including independent wholesalers and retailers showing the amount of home heating oil supplied these customers during the base period *July 1, 1972 through June 30, 1973.* Major oil companies must then be mandated to supply these customers with at least 100 percent of their base period supply during the period July 1, 1973 through June 30, 1974. We feel the dates are important first because you have to have an exact and specific period and secondly, because this particular period coincides with a seasonal delivery period rather than with a less practical calendar period. We believe the proposed mandatory allocation program issued by Governor Love's office on August 9 would, as it pertains to home heating oil, be completely unworkable and would in fact, by reason of the imposition of completely impractical demands on a complex distribution system, result in chaos and much less oil in the overall system. In that respect, I'd like to read excerpts from the brief OHILI position on Governor Love's proposed plan of August 9.

It is OHILI's position that the proposal would be of absolutely no overall benefit due to the following:

(a) It does not assure additional and/or adequate heating oils for any marketing area.

(b) It simply provides for distribution of the shortages, which will result in the same net number of cold homes, cold public institutions and interrupted commercial activities.

(c) It potentially interferes with pre-existing supplier purchaser commitments and/or contracts upon which many retailers have confidently relied to supply their customers for the 1973–74 heating season.

(d) The 10% set aside for state governments imposes an unworkable allocation which would have states competing with each other and us for their considered priorities. These priorities have always been and still can be met through normal distribution channels.

Basically, OHILI cannot subscribe to any plan which does not assure sufficient supply of heating oil to satisfy the historical and growth requirements of the Long Island area and/or takes fuel committed to one purchaser and re-allocates it to another purchaser.

The solution is to place more oil in the market for heating consumption. Therefore, rather than offering extensive comment in specifics of the proposal, OHILI is respectfully submitting the substances of an alternative plan which would allow the retailers of No. 2 home heating oil on Long Island to adequately serve the basic needs of approximately 550,000 oil heated homes.

Alternative mandatory allocation plan for supplies of No. 2 home heaing oil for 1973–74 heating year

All major oil companies and wholesale suppliers should be required to supply all customers, including independent wholesalers and retailers of the base period, July 1, 1972 through June 30, 1973 (hereafter to be referred as BASE PERIOD) at least 100% of the home heating oil supplied to these customers during the BASE PERIOD.

No supplier may use the reason that he has new customers or increased commitments to customers of the BASE PERIOD as a reason for not supplying each customer with at least 100% of his base supply.

If the major oil companies cannot produce enough No. 2 oil domestically, they should be required to import in sufficient quantities to make up the difference between domestic supplies and the aforementioned 100%.

Should imports be required, the Energy Policy Office should take immediate measures in conjunction with the CLC to permit the *complete* passthrough, from supplier through retailer, of *all* increased costs of imports on a weighted average basis.

It appears as though this was done last week by the CLC although we are not completely certain.

OHILI's endorsement of our above described 100% mandatory allocation plan should in no way be construed as our endorsement of any other form of mandatory allocation, namely, the proposed plan of August 9, 1973.

OHILI further requests the Energy Policy Office take immediate measures to enjoin exporting of domestically refined products. We have received reports indicating that, in the midst of this crisis situation, refiners have been circumventing price controls by means of foreign sales.

Basically what we're saying about mandatory is keep it simple and workable and be sure to call on the expertise of those people connected with the major oil companies and the independents who can compose a plan which would be as compatible as possible with the existing home heating oil distribution system. In all due respect, we just don't believe people from outside the industry can write a workable program.

Further on our mandatory allocation program, we agree with all reports, including the ones by the Petroleum Research Foundation and the Department of the Interior, that access to the necessary amounts of foreign #2 oil requires a temporary modification of sulfur standards to a maximum of one half of one percent for #2 oil and 1 percent for residual. This would do two necessary things. It would free up #2 oil which is presently being used to blend with high sulfur residual. Secondly, since well in excess of 50% of foreign #2 oil is in excess of 3 tenths percent sulfur content, this would contribute to the orderly access of product without which there simply wouldn't be enough foreign #2 oil available.

2. UTILITIES MUST BE STOPPED FROM BURNING MORE AND MORE OIL TO GENERATE ELECTRICITY

Public utilities are draining shrinking oil supplies by burning more heating oil than ever before. In 1972, they consumed two billion, eight hundred fifty million gallons of home heating oil as compared to one hundred twelve million gallons in 1967. Better than ⅔ of the oil used goes up the stack as unharnessed, wasted energy. Electricity used in home heating is the most wasteful consumer of this natural resource and its expansion must be stopped. Unfortunately, the worst example of waste of natural resources occurs right on Long Island where the

Long Island Lighting Company is actively promoting electric heat with heavy advertising, large cash subsidies to builders and high-powered untrue public relations. Why should utilities, who have for all of the years of environmental concern refused to spend money on available technology such as stack scrubbers, be allowed to literally rob the home heating oil industry of its clean burning product to satisfy increasingly strict sulfur standards. If the utilities need more #2 oil, they must be required to import. The cost impact would be far less to the consumer since the base of customers over which the cost would be spread is much larger than any other. It might mean 8 or 10 dollars a year instead of 30 or 40.

3. ALL U.S. REFINERIES MUST BE MADE TO SWITCH IMMEDIATELY FROM MAXIMUM GASOLINE

Production to Maximum Home Heating Oil Production and not return to gasoline production until this winter's crisis is over and next winter's prevented. Priorities must be considered. National health is paramount. Remember, a shortage of gasoline is at worst an inconvenience but a shortage of home heating oil is potentially a dangerous health hazard and it can close schools, hospitals, office buildings. It is a catastrophe that must be prevented. If oil is going to be short, the government has to bite the bullet and act to curtail less essential uses.

4. FEDERAL, STATE, COUNTY AND LOCAL GOVERNMENTS MUST GET INVOLVED

Fuel conservation needs leadership on all levels. From towns, cities, counties, states and from the federal government, we need more voices to be heard. These governments must promote conservation of fuel by setting specific examples and by promoting specific fuel saving measures such as re-insulation, installation of storm windows and doors, decreased use of gasoline, etc.

For example, if 25% of the homes in the country were brought up to proper insulation standards, we wouldn't have an energy crisis. We need imagination and leadership in this area. How about Federal and state tax deductions—now—for all homeowners costs of re-insulating their homes up to present FHA standards?

On the subject of supply, that's our basic program—a simple, workable mandatory allocation program supplying a minimum of 100% of the 1972–73 base period or no program, severe restrictions on utility use of domestic home heating oil, priority to maximum production of No. 2 heating oil by U.S. refineries and, finally, strong governmental leadership and action in the area of fuel conservation.

Before leaving the supply problem, I must state categorically that if heating oil rationing to the consumer is contemplated as a last resort or as a fallback instead of action now, it simply cannot be done. Gasoline yes—but there is no way the home heating oil distribution system could work under rationing.

Potentially more disastrous to the consumers oil supply this winter are the Phase IV CIC regulations as they apply to the home heating oil retailers. If major changes are not made, many of the retail heating oil dealers who supply 90% of the oil on Long Island will be forced out of businesses and the thousands of homes which depend on them will go cold.

Apparently, the CLC decided that the home heating oil dealer gouged the public during the January through May, 1973 period just prior to the June freeze. Based on this totally erroneous premise, these CLC people devised a punishment which would destroy the retail segment of the oil industry.

Before examining the discriminatory regulations, let's look at the retail prices which have prevailed on Long Island over the past two and a half years and at the retail margins during the five months prior to the freeze..

Based on a survey of a cross section of 30 typical dealers on Long Island, the retail price of home heating oil increased 1.97% during the calendar year 1971, 2.32% during the calendar year 1972 and 9.4% during the five months January through May, 1973 *during which time there was a 13.6% increase in product costs to the retailers* not to mention substantial increases in labor and other operating costs. Also, during this period, the retailers' gross margin as a percent of cost or in other words. his percentage markup actually decreased by 6.2%. These figures were checked against those in New England and are virtually the same. These figures and any others desired by this committee, the CLC or any government agency, are available at any time. The point is, the CLC never once checked our industry figures in coming up with the preposterous statement made by Dr. Dunlop that the price of petroleum products, in which he included home

heating oil, had increased 89%. To us it is outrageous and frightening that a totally uninformed government agency can impose potentially fatal punishment on an industry without any hearings or, what's worse, any meaningful investigation.

I suppose that since the *premise* upon which the regulations is based is fallacious, it follows that the *regulations* must be ruinous and discriminatory—and they are—incredibly and unbelievable so.

They are *ruinous* because it doesn't take an economics MBA to figure out that if product costs and other costs increase, as they are increasing, and they exceed the profit margin before taxes of the business involved, it will not be long before the business will be *out* of business. We're not talking about what *might* happen, we're talking about what *has* happened and *is* happening! Major oil companies and independent wholesalers have already increased prices to retailers in amounts up to 1.7 cents a gallon since Phase IV started just a month ago. When you make about a penny a gallon before taxes, how can you absorb 1 to 1½ cents per gallon and stay in business?

Phase IV is grossly *discriminatory* for the following three reasons:

1. All segments of the petroleum industry can pass through all increased product costs. The retailer is forced to absorb all these costs except increased costs resulting from imported No. 2 heating oil. So far, the cost increases from the majors to us have *not* been from imported heating oil but from increased domestic and foreign *crude* costs.

2. The rollback of the heating oil markups for the retailer is to January 10, 1973. The majors are allowed a May 15, 1973 markup date. The heating oil retailer is thus forced to absorb all operating cost increases since January 10. There was a big bulge in costs between January 10 and May 15 and the major have been allowed to pass these increased costs on but not so the retailer.

3. The small independent heating oil retailer is not exempt from controls whereas in all but the petroleum industry, firms having fewer than 60 employees are exempt.

Immediate relief must be given in the following manner. We're not asking for anything or less than anyone else—just equitable and reasonable regulations.

1. The independent heating oil retailer must be permitted to raise retail prices to reflect any foreign and domestic product cost increases on a dollar-for-dollar basis, and to institute each retail raise on the date that the cost increases are experienced.

2. The August 19, 1973 ceiling price should be the average cost of inventory on August 1, 1973, plus the actual markup on June 1–8 (when the freeze began). The 7 cent provision presently in the Phase IV petroleum program may be feasible for gasoline retailers, but is inadequate for the heating oil retailer who must buy and maintain fleets of trucks, wait for his money, provide 24 hour service, etc.

3. The independent heating oil retailer should be permitted to raise prices to reflect all other cost increases such as labor, truck maintenance, and other related operating expenses, on a dollar-for-dollar basis.

4. The independent heating oil retailer should be eligible for the small business exemption which appears in Part 150.60 of the main body of Phase IV price stabilization regulations.

Summarizing the Phase IV problem, we must cannot understand why the independent retailer should be forced to *solve*, at the risk of his business, the inflationary problems of the international petroleum industry which are dealt with in board rooms of major companies, caucuses of OPEC petroleum ministers a and in policy meetings at the highest levels of government. We don't want anything special or different, we'll be happy to live with all the regulations imposed on all other retailers—we just don't want to be punished for something we didn't do and have no control over.

In conclusion ladies and gentlemen, unless immediate action is taken to see to it that more heating oil is put into the system, severe shortages will occur. Unless Phase IV is immediately modified, there will be few heating oil dealers around to deliver the oil even if it *is* made available.

Thank you very much for the privilege of appearing before you today, and I will be pleased to answer any questions that you may have.

Chairman HUMPHREY. You mentioned something about refiners and circumventing price controls by means of exports. Do you have any specifics?

Mr. KENNY. Well, that is in the prepared statement, and I was referring to the very same thing that was mentioned earlier today, the press report from Congressman Aspin, I believe it was, and also to publications in two of the top trade publications in our industry, one is Platt's Price Sheet and the other is Oil Buyer's Guide. In each of these publications, this is reported to have taken place. That is the source of my information.

Chairman HUMPHREY. I see. You mentioned that the 7-cent minimum markup is not adequate. What do you consider to be adequate?

Mr. KENNY. Well, first of all, the 7-cent markup was put in, as Mr. Dunlop said, because of the fact that there were gasoline price wars back on January 10, 1973.

Of course, that is again the fact that all these regulations are geared toward gasoline and not home heating oil. The home heating oil guy cannot lead on the same margin as the gasoline station, because he has a fleet of trucks, and he has to hire people to go out to deliver the oil. They do not come to his place and pick it up.

His service department which he runs, which provides home heating service 24 hours a day, 7 days a week, I would say that the margins depending upon the area, and this, of course, depends upon the labor market, in metropolitan areas it would be much higher, but it probably runs in the area of somewhere between 8½ and 10½ cents necessary to operate heating oil. And I think that it is important that this committee understand the difference, because apparentlythe CLC does not, between the gasoline retailer and the home heating oil retailer.

Chairman HUMPHREY. Yes, I think we do. I think we do understand

Mr. KENNY. I appreciate that.

Chairman HUMPHREY. That 7-cent minimum, of course, is the margin in which you have to cover all your expenses, isn't it?

Mr. KENNY. That is correct, right.

Chairman HUMPHREY. I mean that is the gross.

Mr. KENNY. Well, it is either 7 cents or the markup of January 10, and the point is that the markup of January 10 is something that we have been singled out, yet not the major oil companies, and we have had increases since January 10 which coincide, as you know, with the end of phase II. We have had increases in labor in all of our trucks, truck maintenance and everything. We have to go back to January 10, we cannot pass on those expenses, majors can.

Chairman HUMPHREY. Majors can but you cannot. You can only pass on that extra cost for the product, is that correct?

Mr. KENNY. We cannot even pass that along unless it is imported heating oil.

Chairman HUMPHREY. That is what I mean, imported heating oil.

Mr. KENNY. Well the point is that the increases that we have gotten so far are not from the imported heating oil.

Chairman HUMPHREY. But the big operator, that is the integrated oil companies, the majors for example, can pass on their increased labor costs, their increased operational costs, their increased crude costs, can they not?

Mr. KENNY. They are allowed to pass on their operating costs as differentiated from crude costs or product costs——

Chairman HUMPHREY. Yes.

Mr. KENNY [continuing]. Up to May 15, 1973, we go back to January 10.

They are allowed to pass on all their product increases. They have been passing them on since the beginning of phase IV, without any restraint at all.

Chairman HUMPHREY. Very well, we thank you very much, Mr. Kenny. Thank you so much. We will take a brief recess.

[A brief recess was taken.]

Chairman HUMPHREY. We will reopen the hearing.

The first witness is the mayor of St. Paul, Mayor Cohen, who is here along with Councilman Roedler, and what is the title that you have Mr. Roedler?

Mr. ROEDLER. Senator, I am chairman of the St. Paul City Council's Energy and Environmental Conservation Committee.

Chairman HUMPHREY. Mr. Mayor, I think you would like to lead off.

The mayor and I have worked together for a long time on these problems and we welcome your testimony because we know, again, that it will be pertinent and related directly to the problems in our capital city of St. Paul, Minn.

Go ahead, sir.

STATEMENT OF HON. LAWRENCE D. COHEN, MAYOR, CITY OF ST. PAUL, MINN.

Mayor COHEN. Senator Humphrey, I wonder if there is anything we can do to bring about the same kind of cooperation that the legislative branch of the St. Paul government has with our administrative branch of government?

Chairman HUMPHREY. I am glad to see that it is so good.

Mayor COHEN. I am here today to acquaint members of your committee with some of the critical problems that we face this winter in a city that is part of probably what is the largest and coldest metropolitan area in the country. I would like to outline some of the problems, and Councilman Pat Roedler, who is with me today, is chairman of our special energy committee and will detail some of our moves in response to the problems.

As Governor Anderson said earlier, there is a desperate need for a national energy policy. It should include a planned effort to increase and allocate our energy supplies, and simultaneously conserve fuel and power through legislation and the educational process. But Senator Humphrey, as a former mayor of Minneapolis, you know that you are more concerned with the immediate health, welfare and safety of the citizens you represent. And I represent over 300,000 citizens of St. Paul. I cannot wait while the Federal bureaucracy spends weeks and months developing flow charts and columns of figures and multiplier formulas and has consultations with suppliers and big industries that will devour all that we as public officials allow it to.

Already, major fuel suppliers refused to bid on our city and county contracts. We did receive one offer, and one only, for 5,000 gallons daily for a specified period of time, provided we picked it up ourselves in some town out in Wyoming. And all the bids that we are placing out for fuel for our city's senior citizen highrises, for our police cars, for our schools—the envelopes are coming back empty. We had to exert extreme pressure on the contractor who we had a contract with for our gasoline who wanted to cut off our supply of gasoline for

our squad cars. There is no one to supply heating fuel for thousands of elderly people in our public housing apartments, or for the children who will be attending the St. Paul public schools in Independent School District 625. We have governmental agencies and industrial customers on so-called interruptible gas service, where the customer is cut off when the temperature drops below a certain level. Our main electrical oil, our electricity supplier, Northern States Power Co., obviously anticipates an energy problem because it has indicated that the cutoff temperature will be raised above the current level of zero. And we anticipate that it will be somewhere along the line of 10 degrees above zero. Now I don't know how many members of your subcommittee have been to St. Paul, Minn., in January or February.

Chairman HUMPHREY. Invite them up for a winter carnival although that is generally pretty nice, you have the weather under control there at that time.

Mayor COHEN. Well, if we don't have it under control, we try to find ways to control it, but there are a lot of days when the temperature drops well below zero.

What this means is that those with standby oil burners will switch over, thus contributing to the oil shortage, and a substantial number of residential homes, I believe Pat Roedler said somewhere in the area of 20 percent, still are burning oil for heat in their homes.

In short, I recognize the economics behind some of these decisions. The fuel suppliers did not bid because they expect the higher price this month or next month. But Senator, we are willing to pay the higher price, but right now we cannot even do that. We are not talking about the price of beef here. My people can substitute for beef if the price is beyond their means or there is a shortage. The simple fact is that there is no way that anybody can live in Minnesota this winter with insufficient heat.

I also recognize that we are only part of the entire picture, but in a sense, St. Paul, Minn., can be looked on as a microcosm of what is going to happen around this Nation. And we need your help.

Meanwhile, I would like to call on Pat Roedler now to tell you about what we are going to do to help ourselves in the meantime.

Thank you.

Chairman HUMPHREY. Mr. Roedler, we welcome you, Patrick J. Roedler, for our record here, and you are chairman of the St. Paul City Council's Energy and Environmental Conservation Committee. Please proceed.

STATEMENT OF HON. PATRICK J. ROEDLER, CITY COUNCILMAN, ST. PAUL, MINN., AND CHAIRMAN, ST. PAUL CITY COUNCIL'S ENERGY AND ENVIRONMENTAL CONSERVATION COMMITTEE

Mr. ROEDLER. I would like to thank you for inviting me here this afternoon, Mr. Chairman. I want to commend you for holding these hearings on the energy crisis.

There is no doubt in my mind that the energy crisis is indeed upon us, and that the next few months may be comparable to World War II in many ways. The only difference is that we fought those battles somewhere else, and we are fighting this one here.

Before I begin talking about what we are doing in St. Paul and what needs to be done, I would like to briefly explain my background. I am a licensed steamfitter, gasfitter and pipefitter, and a member of the U.S. Association of Journeymen and Apprentices of the Pipe Fitting Industries of the United States and Canada. I am also a member of the St. Paul Pipe Fitter's Local No. 455. I spent 20 years in the steamfitting industry, including a 5-year apprenticeship. I have worked on refineries and pipelines, on big and small heating systems, in homes and industrial plants. Because of my technical background and experience, I am probably sensitive to aspects of the energy crisis that may escape the average layman.

You have just heard Mayor Cohen outline the energy problems in St. Paul. If I may capsulize what he said, the biggest problem is waste. Incredible waste. Wasted fuel and energy in schools and factories and in homes and big industries. Waste from the time our fuel comes out of the ground until the time that it is consumed.

The St. Paul Energy Committee is now in the process of gathering information on fuel supplies and projected shortages, including data on fuel systems and the use of energy sources. The information we have gathered shows an incredible amount of waste by well-meaning and well-intentioned people.

Our schools do not have enough fuel. School officials are considering closing during January and February of this year and staying open in June and July. Even worse, they are at a loss to better utilize the fuel they have because 19 of our schools have only one thermostat. There is no zone control. This is total waste.

We have found that the same thing applies to the average homeowners. Proper insulation of the average home, which is not adequately covered in the new State building code, could save as much as 35-percent fuel consumption per home. The same applies to home heating equipment. The technical staff people at the local technical vocational institute have informed my committee that relatively simple steps, such as having furnaces and oil burners cleaned, can save the average homeowner as much as 25 percent on his fuel bill. Change that sentence around and it means one-fourth of the fuel Mr. Smith will use to heat his home this winter is wasted.

We are planning a massive public education effort, including seminars for homeowners and businessmen, to disseminate this information and encourage people to take steps to reduce their wasted energy.

But the waste in homes and schools and hospitals is minute compared to the waste that occurs in industry—with devastating effects. We have found that industry is the largest waster of energy, and that the petroleum industry is the worst of all.

Let me give you some specific examples. First, I am sure you have seen the flare stacks at oil refineries that mark refinery locations and signal that all is well, often on a 24-hour basis. St. Paul has two such refineries. This is done for very necessary safety purposes, but it is wasted energy because the refineries are burning gas without recapturing the heat. The flame from these flare stacks could be atomized, mixed with air, induced into storage systems, or could be condensed and used as LP gas. This is terrible waste. It could be treated like any other fuel. The heat recovery would reduce the refineries' mass consumption of other fuels themselves.

Second, and I believe that this is very serious, is waste from cross-country pipelines, both gas and oil, that rupture for various reasons and cause great spills. In the last 3 weeks, 1.1 million gallons spilled in northern Minnesota because of two pipeline ruptures. Both occurred with the same firm, and both happened in the same area near the small community of Stephen and the Tamarac River.

The State's pollution control agency described the situation as "incredibly lucky" because there was minimal environmental damage to the river and farmland, and 90 percent of the fuel oil was recovered. I don't know how incredibly lucky we will be the next time. And I can only think how many homes this fuel oil could have heated in the city of St. Paul. There are devices available which can effectively detect weaknesses of pipelines before ruptures occur, which do not take the pipeline out of service, and which are less expensive in the long run than the existing detection methods. It is simply a matter of applying existing technology. I do not think we have any choice but to require the petroleum industry to take these steps.

Third, our local power company has 428 industrial users in St. Paul that are interruptible customers. That means that when the temperature drops below a certain point, these industrial users are notified to stop all gas consumption and go on standby or alternate fuel. Very often, their standby is the same Nos. 1 and 2 fuel oil that is used to heat the average home with an oil burner. The net result is artificial competition between industry and the homeowners for an already scarce resource.

In the past years, this interruptible system was put into effect when temperatures were considerably below zero. In recent years, it went into effect at zero degrees, about 70 days during the winter. This year, the local power company predicts 135 to 150 days when interruptible customers will be competing with homeowners for No. 1 and 2 fuel oil. This would indicate that the interruptible temperature level might be raised and could mean a very serious situation in St. Paul.

The industrial and commercial users can use other standby fuel, such as No. 5 and 6 fuel oil, which cannot be used to heat the average home. All that is required is the installation of equipment to change the viscosity or weight of the oil.

Fourth, waste of natural gas. The Federal Power Commission has put us on notice that there will no longer be natural gas available for industrial use after 1980. There is no reason why industries that will have to switch within the next 7 years cannot make that change immediately. This would eliminate their consumption of our dwindling natural gas supplies as soon as they have the new equipment installed.

Last, waste of energy by industries using equipment that has a high energy demand in terms of startup time. There is a general movement today toward 4-day work weeks with longer hours each day. The popular reasons are more leisure time for hardworking men and women. But a much better reason is the energy saved by starting up this equipment 4 days a week instead of 5, and running it longer. The highest energy usage comes from the incredible amount of fuel required to get the equipment started. Extending the actual running time would be minimal if you compare use of energy sources.

I have described to you just five situations which can be remedied, but the remedies are far beyond the scope and authority of my energy committee and the St. Paul city government.

I would like to make several recommendations for action at the congressional level.

No. 1, require all oil refineries in America to utilize the energy now being wasted in their flare stacks and cut down on their massive consumption of other fuel oils.

No. 2, require the petroleum industry to install in-service pipeline inspection equipment which could detect pipeline weaknesses and prevent ruptures that lead to gas and oilspill waste.

No. 3, require industries now using No. 1 and 2 heating oil, to install equipment that would allow them to us No. 5 and 6 oil, and take them out of competition with the average homeowner.

No. 4, require industries to convert immediately from natural gas to other fuel sources, preferably coal, allowing reasonable time for the changeover.

No. 5, require industries with equipment having a high energy usage for startups to adopt a 4-day workweek during months when energy levels are lowest, and ask for the collective cooperation of their bargaining agents, namely the unions representing their employees.

The key is mobilization and full utilization of all our resources, similar to our World War II effort. That means the city, the State, and the national level. That means big industries, small industries, and the private homeowner.

There is a lot of talk today about new sources of energy. In fact, I'm chairman of a special task force which is presently studying a system that would utilize solid waste as fuel in an enery recovery program to generate steam, electricity, and refrigeration.

But the development of new sources of energy takes time, too much time. It would take an extremely long time to convert all the homes in the United States to solar energy. And we haven't even developed solar energy to the point where it could be used in private homes.

The point is that petroleum and other existing fuels are here to stay. Our whole emphasis must be on conservation and elimination of waste. And by emphasis I mean Federal legislation, if necessary, for mandatory fuel allocation for our immediate problems, in addition to the recommendations I've outlined earlier. We don't have any other alternative.

Mr. Chairman, I once read that use leads to abuse, and abuse leads to abuse, and abuse leads to legislation. I think we are now experiencing abuse.

I would like to thank you for inviting me here today.

Chairman HUMPHREY. I thank you. I was just saying to Mr. Cox of our staff, that this is one of the better statements that we have received. And the whole subject of community planning for conservation and your knowledge of the industry, particularly insofar as the construction is concerned and the refineries and the pipelines, it is very, very helpful and useful. It is my intention to abbreviate some of this testimony that you have given, to the major and a few others here this morning, and I would not only like to have it for a part of this record, which will be utilized for our reports and our recommendations, but I would also like to include it in the Congressional Record so it will get a wider circulation.

I think your suggestions are very practical. I hope that you have sent them around to other municipalities. I trust that you have done that.

because if we are going into a conservation program, we need the kind of practical suggestions that you made. Yours go much further than others, not only to the immediate user at the home level, but going back into industrial uses, and pipeline and safety practices, conservations measures on spills and so forth. I am aware that the spill took place in the Stephens and Temarac areas. Now that amount of oil surely could have been a lot of health to our State for the winter months.

I think that we will just call it quits today. It is 2:30, we have been here a long time, and I want to thank you very much for coming. If we need you at another time, we will call on you, and we will welcome any further suggestions that you make.

Mr. Mayor, thank you for the leadership that you have given your community. We are well aware of it, as a matter of fact, members of this committee have been told about it for no other reason than I have reminded them.

Thank you.

The subcommittee is adjourned.

[Whereupon, at 2:30 p.m., the subcommittee adjourned, subject to the call of the Chair.]

APPENDIX

SEPTEMBER 22, 1973.

The PRESIDENT,
The White House,
Washington, D.C.

DEAR MR. PRESIDENT: I urge you to institute immediately a mandatory allocation program for home heating and fuel oil, and for propane gas.

As Chairman of the Senate Consumer Economics Subcommittee, I have urged this action since last May.

Our subcommittee has received testimony, in hearings last May and June, and again this week, from governors, local government and school officials, representatives of consumer groups, fuel producers, distributors and retailers, scientific experts, economists and top officials of the Administration.

The overwhelming opinion expressed at our hearings, as well as at those of other committees, is that mandatory allocation of propane, home heating oil and diesel oil is urgently needed to avoid severe hardships for many people under the best conditions this winter, and possible disaster under bad conditions.

I introduced legislation to require a mandatory allocation system, S.J. Res. 98, on April 18, 1973.

The Congress enacted authority for you to institute such a system in the Economic Stabilization Act approved on April 30, 1973. With my support, the Senate overwhelmingly adopted Senator Jackson's bill, S. 1570, the Emergency Fuels and Energy Allocation Act, by 80 to 10 on June 5, 1973, to require the establishment of mandatory allocation.

September is now upon us. The heating season already is beginning in large parts of the United States. Yet fuel users still cannot get firm contracts from suppliers. Some persons in possession of supplies are hoarding them in hopes of higher future prices, and black marketing is breaking out in the desperate scramble to get fuel.

The need for mandatory supply allocation is made unambiguously clear and compelling, moreover, by recent forecasts for the coming winter by congressional committees and executive agencies, as well as by private sources. These forecasts are unanimous in concluding that the fuel outlook is perilous and could become very critical if fortune is not consistently on our side.

There is more than a 50 percent chance that events of this winter will bring on serious shortages of at least regional magnitude. There is a very significant risk of shortages of national scope. Without mandatory supply allocation, these shortages could quickly hobble the United States economy, disrupt essential public institutions such as education, and cause widespread hardship for homeowners who heat with oil. Economic disruption would tend to spread both inside and outside the areas immediately affected by lack of fuel.

Moreover, we are firmly of the view that the allocation system adopted should assume that normal supplies are channeled through independent fuel dealers whose continued services are vital for efficient distribution.

Each day's delay increases the chances of unnecessary hardship for many people. Mr. President, it is essential that you act now, either under your existing authority in the Economic Stabilization Act, or through urging immediate approval by the House of Representatives of the Senate passed bill, S. 1570.

Sincerely,

HUBERT H. HUMPHREY.

Prospects of Distillate Oil Shortages for Winter 1973–74[1]

A STAFF STUDY PREPARED FOR THE USE OF THE SUBCOMMITTEE ON CONSUMER ECONOMICS OF THE JOINT ECONOMIC COMMITTEE, CONGRESS OF THE UNITED STATES, SEPTEMBER 17, 1973

Summary and Conclusions

This report contains an analysis of the distillate oil market in Petroleum Districts I through IV (i.e., excluding the Pacific Coast States, Nevada and Arizona).[2] Its first two sections present background information on the origins of the oil shortage in the United States and the nature of the market for fuel oil. Sections III and IV concern projections for next winter. Section IV presents the results of an independent analysis by the staff of the Joint Economic Committee of the factors that could increase fuel oil demand or constrict supply and of the pattern and extent of shortages that could result.

The Joint Economic Committee analysis in conjunction with a review of other studies indicates the following main conclusions:

1. Given normal weather and fairly conservative estimates of distillate oil demand in Districts I through IV, a daily average of 500 thousand barrels must be imported into this area from October to March (14 percent of total consumption), and refinery operations must continue at 96 to 97 percent of capacity (by the new API utilization index) to avoid shortages in this area next winter. Some of the crude oil refined in the U.S. also will come from abroad. This allows for minimal refinery maintenance.

2. Even if these conditions are granted, local shortages will crop up unless inventories are optimally distributed about the country and among the sectors of the distribution system, including independent distributors.

3. Four potential problems pose major threats to the achievement of adequate fuel oil distribution next winter. These are (a) sustained sub-normal temperatures; (b) unforeseen substitution of fuel oil for natural gas; (c) scarcity or disruption of crude and distillate oil imports; and (d) potential shutdowns or breakdowns of refineries in need of maintenance. The first two factors, which would increase demand, not only would run down inventories, but also would tend to raise the minimum inventory levels adequate to supply all orders without shortages. Conservation of fuel, therefore, has a double pay-off in postponing the day when shortages become acute.

4. Shortages of nationwide scope are not likely to begin before January. With mildly colder-than-normal weather, such as that occurring in about four out of ten winters, shortages would begin in early February and grow to about 6 percent of demand in March for the region from the East Coast to the Rockies with worse problems in local areas. With more severe weather, such as occurs in three out of ten winters, shortages would begin in late January and reach the range of 14 percent in March. With a harsh winter (20 percent probable), shortages would run at about 9 percent in February and 15 percent in March. Barring imports of 200 to 300 thousand barrels per day in addition to those assumed above, the situation would become very critical. It is doubtful that such large imports could be obtained in time.

5. If, on the contrary, new supplies are reduced by, say, 200 thousand barrels per day through import disruptions or refinery breakdowns, another 7 percent must be added to the prospective shortage in February and some 17 percent in March. If combined with unusually cold weather, this eventuality would mean shortages growing rapidly toward 30 percent; in other words, an economic crisis for the United States unparalleled since the Great Depression.

6. In the absence of effective Federal policy, disastrous shortages could strike certain regions of the United States under much milder assumptions than those above. These regions in which shortages tend to concentrate are New England, the Upper Midwest, and the Mid-Atlantic States (New York, New Jersey and Pennsylvania). The prospects of grave problems in these regions are very high, and it is for this reason that mandatory Federal allocation of fuels is now essential and must not be delayed any longer.

7. Mandatory allocation of crude oil also can increase domestic refinery output slightly and can help to move low-sulphur fuel to areas where it is needed most to minimize any necessary sacrifice in air-quality standards.

8. To be feasible any program of fuel allocation must provide for conservation of fuel oil in space heating and transportation uses, which are overwhelmingly

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[1] This staff study was done at the request of the chairman of the Subcommittee on Consumer Economics and has not been reviewed by the other members of the subcommittee.

[2] Petroleum Administration for Defense Districts. See Appendix, Map 1.

dominant in the winter; without such cutbacks the program would demand inordinate sacrifices from a narrow base of other users, such as manufacturing, construction and service industries, and would therefore involve unacceptable costs in production and employment losses.

Despite the fact that the summer gasoline shortage of 1973 was overcome with a minimum of inconvenience, the public must recognize that fuel shortages will tend to get progressively worse for a number of years, and that conservation of oil, gas and electricity in all uses is the order of the future. Voluntary consumer constraint in heating uses of these fuels could do much to avoid the onerous necessity of rationing for the coming winter.

I. The Background of the Oil Shortage

In the past three years, America has become subject to growing shortages of two important primary fuels: petroleum and natural gas. We presently rely on these fuels to cover more than three quarters of all U.S. energy needs (see Appendix, Table A).

The reasons for the shortage are several. Domestic production of crude oil from existing wells reached a peak of 11.3 million barrels per day in 1970 and has been declining slightly since then.[1] Oil imports were restricted by Presidential order until May of 1973, and U.S. refining capacity which consequently has shown very little expansion in recent years, no longer is able to satisfy all U.S. demand. Natural gas output in the U.S. is estimated by the industry to have reached a peak in 1972, and this fuel is not yet imported in large amounts because of the limited number of special ships capable of carrying it in liquified form and the very high cost of importation. Nearly all of the growth in U.S. energy consumtpion now is being met by increases in imports of refined products. As refineries in this country are augmented, future growth will have to be satisfied through rapid expansion of crude oil imports from relatively remote sources, such as Africa and the Middle East.

In the face of these supply constrctions, U.S. consumption has grown exceptionally fast in 1972 and 1973. In the area east of the Rocky Mountains—the market most affected by the shortage—demand for all finished products grew by 7.7 percent in 1972 against only 3.1 percent in 1971; growth continues at a high rate in 1973. This reflects, among other things, the nation's recovery from recession. Demand for distillate oils in this nation soared by 10.2 percent in 1972 as a result of exceptionally cold weather in the fall and of switching to distillate by users forced off of natural gas (which was partially unavailable) and high-sulphur residual oil (which has been banned in some places for environmental reasons). The pressure on distillate oil supplies to substitute for these two fuels will continue to be severe.

The public became aware of fuel shortages with the onset of fuel oil and natural gas scarcities in the early winter of 1972. Scattered shortages of these fuels caused temporary economic and social disruption, particularly in the Upper Mid-West. The problem would have spread and gotten much worse if temperatures in the later winter had not turned unusually warm. In any case, underutilization of refinery capacity before June, 1973 and the diversion of an exceptional fraction of refinery output to fuel oil to cover last winter's needs left inadequate inventories of gasoline for the summer of 1973. Since June, most refiners have reported sustained extraordinary production rates to keep up with consumption despite unprecedented imports.

In this year's very tight markets for oil, traditional supply relationships have been abrogated throughout the industry, and prices have surged upward despite the re-imposition of mandatory price controls on the major oil firms less than two months after all so-called Phase II controls were lifted in January. A sizeable number of independent distributors have been forced out of business for lack of supplies, and several companies, including majors, have contracted their areas of operation. A state of great uncertainty prevails for both independent suppliers and consumers.

It is widely agreed that shortages are likely to intensify for at least several years as the natural growth in oil demand confronts fixed refining capacity and certain constraints on the supply of refined products to be imported.

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[1] See U.S. Department of the Interior, Bureau of Mines, "Mineral Industry Surveys: Crude Petroleum, Petroleum Products, and Natural Gas Liquids," December issues.

II. The Recent Pattern of Fuel Oil Consumption

This report confines its concerns mainly to the market for distillate fuel oils, the importance of which is paramount for this coming fall and winter. Residual fuel oils will be examined because their low-sulphur grades are in short supply, and sulphur limitations are forcing users to switch to distillates and to mix distillates with residual. The shortage of liquid petroleum gases (propane, butane, etc.) also poses a great threat to the proper drying of certain crops and to rural home heating. This problem, however, will not be encompassed in this report.

Table 1 shows the distribution of distillate and residual fuel oil sales among their various uses in the United States. By far the largest use of distillate is for space heating in homes and commercial establishments (over 50 percent). Heating use is followed in importance by highway uses of diesel fuel and by railroads. The use of distillates by electric utilities has grown rapidly, beginning in 1968 from a very low level. Utilities are clearly the heaviest users of residual fuel, for which their demand has grown very rapidly. They are becoming ever more dominant in this market over other uses which are stagnant or declining. Estimated nationwide sales of residual oil overall went up by only 2.7 percent in 1972; this fuel is in short supply only in jurisdictions where users are legally confined to low-sulphur grades, but these areas now cover many of its major markets, as will be discussed below.

TABLE 1.—SALES OF DISTILLATE AND RESIDUAL FUEL OILS IN THE UNITED STATES BY USE, 1970–72

[In percent]

Uses	Distillate[1]			Residual[2]		
	1970	1971	1972[3]	1970	1971	1972[3]
Heating[4]	56.2	53.9	53.6	23.1	21.8	20.1
Highway vehicles (diesel)	16.0	16.9	17.8	(5)	(5)	(5)
Railroads	9.5	8.9	8.9	.3	.2	.2
Off-highway vehicles (diesel)[6]	5.0	5.1	4.5	(5)	(5)	(5)
Ships	2.1	2.2	2.3	11.2	9.4	8.5
Industry (excluding oil companies)	4.7	5.1	5.6	17.3	16.2	15.9
Oil companies	1.2	1.5	1.3	4.8	3.9	3.8
Electric utilities	2.7	3.6	3.4	38.8	44.4	47.5
Military	1.3	1.8	1.7	3.6	3.5	3.3
All other	1.1	1.0	1.0	.9	.7	.7
U.S. total (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Million barrels per year	927.3	971.3	1,037.9	804.3	837.9	860.3

[1] Includes diesel fuel.
[2] Includes navy grade and crude oil burned as fuel.
[3] Preliminary estimates.
[4] Includes range oil.
[5] Not applicable.
[6] Mainly agricultural and construction uses.

Source: Bureau of Mines; 1972 figures are preliminary estimates by the Office of Oil and Gas with assistance from the Bureau of Mines.

The geographical distribution of fuel oil sales also is heavily concentrated, as shown in Table 2. The three Mid-Atlantic States alone, New York, New Jersey and Pennsylvania, used an estimated 25 percent of all distillate fuel consumed in the United States in 1971 and 36 percent of all residual fuel. PAD District I[1] consumed 50 and 75 percent respectively; PAD Districts I and II accounted for nearly 80 and 83 percent. Sales of these products in the South and West of the country (PAD Districts III through V) were small.

The sale of oil for heating which is our overriding concern for this winter, is even more concentrated by area. PAD Districts I and II accounted for 92 percent of the distillate heating oil consumed in the United States in 1971; PAD District I alone accounted for 83 percent of the residual fuel burned for heat. It is these uses that tend to peak sharply in the winter months. Electric utilities in PAD Districts I and II burned 87 percent of all fuel oil burned by electric utilities, with the use of residual fuel again very heavily concentrated in PAD District I. The transport, industrial and military uses, particularly of distillates, are less concentrated geographically.

[1] Petroleum Administration for Defense Districts. See Appendix, Map 1.

TABLE 2.—TOTAL AND PER CAPITA SALES OF DISTILLATE AND RESIDUAL FUEL OILS IN THE UNITED STATES BY PAD DISTRICT AND SUBREGION, 1970–72 [1]

PAD district	Distillate (percents)			Residual (percents)			1971 sales per capita (barrels per head)	
	1970	1971	1972 [2]	1970	1971	1972 [2]	Distillate	Residual
PAD I	51.0	49.6	48.2	74.2	74.6	73.2	6.0	7.4
New England [3]	(12.6)	(12.4)	([5])	(18.6)	(18.2)	([5])	10.0	12.7
Middle Atlantic States [4]	(25.7)	(25.0)	([5])	(36.5)	(36.3)	([5])	6.5	8.1
PAD II	29.5	29.7	30.8	9.0	8.0	8.3	4.3	1.0
East North Central States [6]	(18.6)	(18.9)	([5])	(7.2)	(6.7)	([5])	4.5	1.2
Upper Midwestern States [7]	(5.7)	(5.7)	([5])	(.9)	(.9)	([5])	5.8	.6
PAD III	7.5	7.7	7.7	3.9	3.3	3.7	3.2	1.3
PAD IV	2.8	3.0	3.2	1.1	1.1	1.3	5.8	1.8
PAD V	9.1	9.9	10.1	11.7	13.0	13.5	3.3	3.7
U.S. total (percent)	100.0	100.0	100.0	100.0	100.0	100.0	4.7	4.0
Million barrels per year	927.3	971.3	1,037.9	804 3	837.9	860.3		

[1] See definition of PAD districts in appendix, table B, map 1.
[2] Preliminary estimates.
[3] Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine.
[4] New York, New Jersey and Pennsylvania.
[5] Not available.
[6] Ohio, Indiana, Illinois, Michigan and Wisconsin.
[7] Iowa, Minnesota, South Dakota, North Dakota and Nebraska.

Source: Bureau of Mines; 1972 figures are preliminary estimates by the Office of Oil and Gas based on information from the Bureau of Mines.

TABLE 3.—THE BALANCE OF REFINING CAPACITY AND PETROLEUM CONSUMPTION IN VARIOUS REGIONS OF THE UNITED STATES, 1971

[In thousands of barrels per day]

Region	Refining capacity (1)	Total petroleum consumption (2)	Difference (1—2) (3)
New England	10	1,105	−1,095
Middle Atlantic	1,421	2,557	−1,136
East North Central	2,261	2,180	81
West North Central	704	1,042	−338
South Atlantic	254	2,046	−1,792
East South Central	588	659	−71
West South Central	5,719	1,661	4,058
Mountain	517	569	−52
Pacific	2,235	1,617	618
U.S. total	13,709	15,212	−1,503

Source: Department of the Interior, "Energy Fact Book."

The geographic concentration of fuel oil consumption does not necessarily mean that all shortages would be located in these high-consumption regions. Table 3, which compares the distribution of refining capacity with that of total oil consumption in different parts of the country reveals that the East North Central region can refine enough products locally to meet all of its needs so long as crude oil is available to its refineries. In addition to New England and the Middle Atlantic States, the South Atlantic and West North Central regions are significantly short on refining capacity and therefore must depend on remote suppliers. The winter consumption is more sharply peaked in the latter of these regions, especially in its northern States of Iowa, Minnesota, Nebraska and North and South Dakota. In general, the market for fuel oils is more highly concentrated in refinery-short areas than the markets for other oil products such as gasoline.

III. The Outlook for 1973/74

The outlook for the coming winter is for tight supplies at best with great risk of shortages stemming from exceptional weather, unforeseen shortfalls in natural gas production, refinery breakdowns, or interruptions of oil imports.

Some satisfaction was reported recently over the fact that the build-up of distillate fuel inventories in anticipation of winter is now ahead of last year despite the reduction in distillate yields from refineries to make gasoline for the summer. This assessment, however, overlooks several facts. First, distillate oil inventories at the beginning of last year's heating season (November 1) were 20 to 25 million barrels (about 10 percent) less than normal (PADs I–IV). Taking the entire heating season, moreover, this winter's demand may be higher than last winter's. Most important, this assessment is based on the weekly inventory figures published by the American Petroleum Institute and deals only with inventories in the hands of refiners and pipeline operators, i.e. the so-called "primary inventories." It ignores the ominous fact that "secondary inventories," i.e. those in the hands of independent suppliers, are down an estimated 5 to 8 million barrels in the Northeast compared to the beginning of the 1972 heating season. These suppliers normally account for about 25 percent of PAD I's total fuel oil inventories at the start of the heating season and 40 percent of those in the area from Connecticut to Maine. Unless these suppliers obtain considerably larger stocks before October 1, shortages in that region would appear certain.

A recent timely report by the Petroleum Industry Research Foundation, Inc. projects the outcome of the next heating season for distillates in Districts I to IV as shown in Table 4:

TABLE 4.—DISTILLATE SUPPLY—DEMAND PROJECTION THROUGH 1ST QUARTER 1974, DISTRICTS I–IV

	Quarters					
	1973					
	1st (actual)	2d	3d	4th	Year	1974, 1st quarter
Crude runs (thousands of barrels per day)	10,359	10,483	10,600	10,545	10,498	10,495
Distillate yield (percent)	25.17	22.40	22.75	24.0	23.6	24.75
Output (thousands of barrels per day)	2,612	2,353	2,415	2,535	2,478	2,603
Imports (thousands of barrels per day)	531	200	175	450	338	550
Net to district V (thousands of barrels per day)	−13	−25	−20	−20	−19	−20
Supply (thousands of barrels per day)	3,130	2,528	2,570	2,965	2,797	3,133
Demand (thousands of barrels per day)	3,567	2,230	1,885	3,250	2,730	3,900
Stock change (millions of barrels per day)	(−39.3)	(+28.0)	(+13.0)	(−26.2)	(−24.5)	(−69.0)
Stock, end quarter (millions of barrels per day)	102.1	130.1	193.1	166.9	.....	97.9

Source: Petroleum Industry Research Foundation, Inc., New York.

The Foundation assumes that yields of distillate from the refineries again will be driven to a high level in the first quarter of 1974, although not quite so high as in the first quarter of this year. Imports of distillates for the markets east of the Rockies are assumed to reach an average of 500 thousand barrels/day for October through March, accounting for an unprecedented 16.5 percent of the period's total new supply. Nevertheless, primary distillate oil stocks by the end of March would be driven down to a level (97.9 mil. barrels) equal to about 25 days' usage at the 1st-quarter rate. The report concludes:

> * * * the stock levels shown in (Table 4) do not assure adequate supplies in the 1st quarter of 1974. On the other hand, these stock levels would probably be sufficient to minimize a shortage. The question is therefore whether it is likely that the supply projections in (the table) will be attained and the demand projections not exceeded * * * this is by no means certain. In the absence of specific government actions it may even be considered unlikely.

The Foundation's estimates of demand for distillate oils, although adjusted to assume average winter weather, are considered conservative by some authorities. Its estimate of 3250 thousand barrels/day for the 4th quarter is over 4 percent less than an estimate for the same region by the *Oil and Gas Journal*,[1] which assumes more consumption of distillates by utilities (including more to operate turbines) and other would-be users of unavailable natural gas. The *Journal*'s

[1] Oil and Gas Journal, July 30, 1973, pp. 97ff.

estimate for all the 48 contiguous States, moreover, is 4.7 percent lower than an estimate of demand by the Independent Petroleum Association of America,[1] which appears to assume a greater switch-over to distillate from residual fuel. If we were to adopt the demand estimate of the *Oil and Gas Journal* for the 4th quarter—the middle estimate—then primary distillate stocks will be drawn down by an additional 12.2 million barrels below the 166.9 million projected for the end of 1973 by the Petroleum Industry Research Foundation. Unless imports could be brought in to restore this amount to the inventory, a serious shortage would develop on about February 1, 1974 and would become quite serious in March. If the higher demand level were to continue into 1974, inventories would fall to a shortage level about one week earlier, and deliveries in March would average over 500 thousand barrels per day less than required. This delivery shortage would amount to about 14 percent of total would-be March consumption in PAD Districts I through IV.

IV. Prospects of Shortages

A computer model has been devised to make forecasts by month of the shortages that might result from various rates of refinery output, fuel oil imports, and demand. It also estimates the percent of fuel cutback implied by any shortage for the national economy and for various regions of the country that are particularly vulnerable to shortage.

Adopting an industry rule of thumb, it is assumed that the level of inventories at the beginning of each month sets a maximum amount that can be delivered during that month. It is assumed that $\frac{1}{30}$ of this inventory level is the maximum distribution achievable per day; that is, to cover all needs, inventories must be equal to at least 30 days' deliveries.

In the base case, the rates of production and imports projected in Table 4 above are added to inventories for each month, and the projected demand (consumption) is subtracted to get the inventory level at the beginning of the next month.[2] If production or imports fall short of projections and/or demand exceeds its projected rate significantly, then inventories of distillates will be depleted to the point at which a maximum delivery rate no longer can satisfy demand. In this case a shortage will occur.

Four major threats to the balance of next winter's fuel oil market now will be evaluated. Two of them—the threat of abnormally cold weather and that of unforeseen natural gas shortages—influence the demand for fuel oil. Two others—potential obstacles to imports and possible breakdowns of domestic refineries—affect the supply.

Demand—The Weather Factor

There is a 50-percent chance that winter temperatures will be colder than the average on which the projections of Table 4 are based. Because winter weather patterns frequently sweep across wide areas of the country, it is unlikely that temperature aberrations would affect one region without encompassing others. Historical data on degree days for the PAD Districts east of the Rockies confirm this. Typically, winter weather originates in the western plains and moves eastward, losing some of its extreme temperatures as it goes. Thus deviations from normal weather in PAD District I and II, where the great bulk of the Nation's heating oil is burned, are highly correlated and within a similar range. It is assumed in this analysis, therefore, that exceptional oil consumption traceable to cold weather will affect all regions alike.

According to past weather data, the standard deviation of temperature (degree days weighted by heating oil consumption) east of the Rocky Mountains is about 8.2 percent of the average. If weather variations are random and distributed normally (i.e. according to a bell-shaped distribution), then the likelihood of winter temperatures at various levels below the historical average is shown in Table 5. There is, for instance, a 40-percent probability that the weather

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[1] *Ibid.*, May 14, 1973, pp. 50ff.

[2] Newly refined supplies and imports are assumed to run steadily at the rates shown for each quarter of the coming heating season in Table 4. Demand, which varies more during the winter than supply, has been distributed by month. For the case of average weather, demand for the six months, October through March, is projected at 2,410, 3,290, 4,050, 4,120, 4,010 and 3,580 thousand barrels per day respectively for PAD Districts I through IV. The beginning inventory in every case is projected to be 193 million barrels on September 30, as assumed in Table 4.

will average at least 2.1 percent colder than the historical mean and a 30-percent chance that it will be at least 4.3 percent colder and so on.[1]

TABLE 5.—PROBABILITY OF SUBNORMAL TEMPERATURES AND INCREASED DISTILLATE OIL CONSUMPTION IN PAD DISTRICTS I–IV, OCTOBER THROUGH MARCH

	Average temperature deviation with this probability (percent)	Estimated response of distillate oil consumption	
		(Percent)	Thousands of barrels per day
Probability (percent):			
40	2.1	1.7	60
30	4.3	3.4	125
20	6.9	5.0	180
10	10.5	7.0	250

The estimated increases in heating oil demands, based on these assumptions, also are shown in Table 5. For small temperature deviations, consumption is assumed to rise by 0.8 percent for every 1 percent fall in temperature, which is well within the range of experience. If temperatures should be more than 5 percent below normal, however, this sensitivity is presumed to decline considerably, because much heating equipment already would be in full-time use at mid-winter.

Table 6 displays the pattern of inventory depletion and the resulting shortages induced within PAD Districts I through IV by unusually cold weather of varying intensity and duration. If an inventory shortage exists on the first of any month, the average daily delivery shortage for that month is shown in parentheses. The date in the previous month on which an inventory shortage actually begins is estimated by interpolating between the beginning inventory levels for the two months using the minimum adequate inventory level for the earlier month—30 days' consumption. This level is shown within brackets between the starting inventory levels for the two months in question. It should be recognized that increases in demand have the double effect of running down inventories and also of raising the minimum inventory level adequate to avoid a shortage.

TABLE 6.—INVENTORY DEPLETION AND DELIVERY SHORTAGES WITH SEVERE WINTER COLD

[Inventories are in millions of barrels]

Temperature deviation (percent)	Starting inventory levels and average delivery shortage for month						Inception of inventory shortage
	1973[1]		1974				
	November	December	January	February	March	April	
0	210	200	167	137	122 [2]—107	98	Mar. 16.
−2.1	208	197	161	129 [2] 122	103 [3]—217	87	Feb. 7.
−4.3	206	193	155 [2] 127	121 [3]—102	96 [3]—508	78	Jan. 25.
−4.3 (December–February only)	210	200	163	129 [2] 124	101 [3]—226	83	Feb. 4.
−4.3 (January–March only)	210	200	167	132 [2] 124	104 [3]—220	87	Feb. 8.
−6.9	205	190	150 [2] 129	114 [3]—387	95 [3]—580	76	Jan. 18.
−6.9 (Janaury–Mrach only)	210	200	167	130 [2] 126	101 [3]—390	82	Feb. 5.
−10.5	202	185	144 [2] 131	105 [3]—744	95 [3]—670	73	Jan. 1.

[1] Oct. 1 inventories are assumed to be 193,000,000 barrels.
[2] Minimum adequate inventories in shortage months.
[3] Shortage in thousand barrels per day.

[1] This discussion is based in part on the data and techniques of an analysis of last winter's fuel oil outlook by the Department of Interior, Office of Oil and Gas; see the testimony by Stephen A. Wakefield, Deputy Assistant Secretary of Interior, before the Subcommittee on Small Business of the Senate Committee on Banking, Housing and Urban Affairs on September 20, 1972. That analysis seems to understate the prospects that abnormal weather would blanket wide areas of the country, however, and thereby to understate the danger of a nationwide shortage in a way not consistent with the degree-day data for the separate PAD districts and their total.

Inventories of distillates build up to their annual peak around November 1 and then decline over the course of the winter. Barring very extreme weather or very severe import disruptions in October through December, therefore, the danger level for inventories will not be reached before mid-January. This holds only for the overall picture, however, and not necessarily for difficulties that might arise from local surges in demand or from faulty allocation of the supplies that exist.

If the winter's weather is normal and distillate demand is as projected in Table 4, and if other factors are normal, then there should be no inventory shortage through March 1. The shortage indicated to begin about March 10 probably would be of a sporadic nature because fuel oil usage by then is rapidly tapering down.

If 2.1 percent colder temperatures continue more or less steadily through the heating season (which occurs in about four out of ten winters), inventories will fall to shortage levels in early February. By March, deliveries will average over 150 thousand barrels per day less than needed, unless decisive conservation and other countermeasures are undertaken. This shortage would constitute about 6 percent of all March uses of distillates in PAD Districts I through IV. Even this would represent a serious situation if the shortage is regionally concentrated. With temperatures as much as 6.9 percent colder than normal throughout the winter (as in two out of ten winters) shortages would arrive in mid-January. Indeed, rationing or mandatory fuel allocation would surely be imposed before this time. Otherwise, shortages are projected to be some 580 thousand barrels in March, or 15 percent of total consumption in Districts I through IV. Still colder weather would produce correspondingly more severe shortages, especially in January and February.

With sustained cold weather beginning in the fall, the onset of an actual shortage would come three to four months after the start of the abnormal weather. Thus, some time would be available to counteract the inventory depletion before crisis levels are reached. In fact, however, harsh weather strikes more frequently in January and February, when inventories already are close to the shortage level and when less time exists to make adjustments. If temperatures run only 4.3 percent colder than normal from January to March, then shortages will ensue in less than six weeks from the start of this period and will grow to some 220 thousand barrels a day, or 5 percent of total consumption in March.

While cold waves normally spread across the main distillate consuming area, the resulting fuel shortages may not be evenly distributed. They tend to appear first and to reach the greatest proportions in New England and the upper Mid-West, which are remote from refining and distributor hubs; and in the Mid-Atlantic market, where the demand for oil products is much larger than the area's refiners can supply. Accordingly, Table 7 indicates the significance of the shortages discussed above as percentages of total distillate consumption in PAD Districts I through IV and in these shortage-prone sub-regions.

Table 7 makes clear that even a shortage that would be moderate if spread evenly across the area from the Atlantic to the Rockies takes on catastrophic proportions if continued, say, New England or the upper Mid-West. A 6-percent shortage for the whole area becomes a 42-percent shortage within New England or a 100-percent shortage within the upper Mid-West; a 14-percent shortage for the whole area, which would be very serious in itself, becomes a 22-percent shortage if manifested only within the especially shortage-prone regions. (Entries greater than 100 percent imply that shortages would not be confined to the region indicated but would spill over to other regions.) As has been demonstrated recently in the markets for gasoline and beef, minor shortages of less than five percent give rise to consumer alarm, hoarding and disruption of normal activities. The ramifications of fuel oil scarcity penetrate more deeply into the structure of the economy than those of beef or gasoline, and shortages of more than 10 to 15 percent would bring normal life to a halt in the affected regions.

TABLE 7.—DELIVERY SHORTAGES AS PERCENTS OF TOTAL DISTILLATE USE IN PAD DISTRICTS I–IV AND IN LIKELY SHORTAGE AREAS [1]

Degree of cold month of shortage	Total for PAD Districts I–VI	Shortage-prone regions			
		Total	New England	New England and Mid-Atlantic	Upper Mid-west
−2.1 percent: March	6	10	42	14	111
−4.3 percent:					
February	3	3	16	6	46
March	14	22	95	33	254
−4.3 percent: (January to March only):					
March	6	10	41	14	110
−6.9 percent:					
February	9	14	61	21	171
March	15	25	107	37	286
−10.5 percent:					
February	17	27	116	40	323
March	17	28	121	42	324

[1] Regions defined as in table 2, p. 9 above.

Thus the lesson of Table 7 is two-fold: (1) constant governmnet surveillance and mandatory allocation of available supplies, where necessary, are vital to the public interest; and (2) conservation of fuel in homes, places of work and public institutions should begin immediately.

It is clear from Table 2 (p. 9 above), however, that any plan of fuel allocation that does not cut back the main winter fuel uses—space heating and transportation—will concentrate the cutbacks on such a narrow range of other users as to be untenable. Whether or not mandatory allocations are imposed, an effective campaign must be mounted to convince Americans throughout the country to conserve fuel by maintaining lower indoor temperatures in the winter. The average thermostat setting in American homes and offices in the past probably has been in the range of 74 to 75 degrees Fahrenheit. As a rough rule of thumb, a one-degree reduction in average indoor settings will offset the effect on heating fuel consumption of a one-degree drop in outdoor temperature. By this rule of thumb, if all thermostats could be lowered by 3 degrees, it would approximately offset the effects of weather 4.3 perecnt colder than normal. Average setting 4.5 degrees lower would roughly offset the effects of weather 6.9 percent colder than normal.

It must be emphasized, of course, that the need to conserve applies not only to users of distillate oils, but also to other fuels, especially natural gas and propane. Not only are these gases themselves very scarce, but the three fuels are substituted in many uses for each other. To the extent that gas is burned unnecessarily for heat, industries and farmers will have less gas to use in production and will seek distillate fuels to augment it.

It is to this matter of inter-fuel substitution that attention is now turned.

SUBSTITUTION OF DISTILLATE OILS FOR OTHER SCARCE FUELS

The projections of winter demand in Table 4 above include estimated demands for distillate oils to substitute for foreseeable cutbacks in natural gas to customers ordinarily supplied on a non-interruptible basis. The estimates of gas cutbacks are reasonably reliable, but the volume of demands that will move to the market for distillate oil is harder to forecast. In the winter of 1972–73, about one-quarter of the cutback in hitherto non-interruptible gas was satisfied with distillates (accounting for an average daily demand of some 170 thousand barrels); some 46 perecnt was switched to residual fuel; another quarter of this diverted gas requirement apparently went unmet or was met with non-petroleum fuels. In the coming winter the success of attempted switchovers to distillates will depend on distillate availability, which is contingent mainly on the level of imports. At this stage, the same division of the gas cutback as last year is assumed. Thus, daily average demand of some 200 thousand barrels (5.6 percent of distillate demand) from November through March is incorporated in the projections of Table 4 and in subsequent computations.

Another attempt to switch large, new demands to distillate fuels will be by users of contractually interruptible natural gas whose supplies will be cut off next winter for a longer time and in greater volumes than ever before. In fact,

most interruptible users will be cut off for the maximum alowable period. Much of the increase in these switches will come at the beginning and end of the heating season when such gas users were not interrupted in previous years.

It is impossible to predict with precision the division of these switches. About 40 percent of interruptible gas users are electric utilities, and most of the rest are industrial. The latter have no priority standing under any of the proposed oil allocation programs. Presumably many of these users can shift to residual fuel. Prices and local sulphur regulations, however, will influence the division between distillate and residual fuels. The price of low-sulphur residual is rapidly moving toward that of distillates, shifting more demand in areas with sulphur restrictions toward the scarce distillates.

Table 8 indicates the relative dependence of various parts of the country on natural gas and oil respectively. New England is not heavily dependent on this fuel. In PAD District I, in fact, most interruptible gas is sold in the South Atlantic States. Because of the pattern of well depletions affecting various pipelines, it appears that the greatest cutbacks in natural gas will be felt in the southwestern States, the western Gulf Coast States and the mid-continent area.

The case of propane also illustrates the interdependence among the markets for fuels. Traditionally used largely for crop drying and rural home heating, propane has been procured in large quantities in recent months by gas utilities to augment their deficient supplies of natural gas for customers. While this practice would be halted by executive order under the mandatory propane allocation program, proposed for comment on August 9, 1973, the shortage of propane for its traditional purposes has reached such proportions, that large crop drying facilities that are equipped to burn oil are attempting to obtain it. People who heat with propane also will be purchasing alternate heating equipment, probably electric, and this will require electric utilities to burn more oil or coal.

In summary, a chaotic scramble for fuels with much inter-fuel switching looms for the coming winter unless a strong allocation program for all fuels is instituted. This will require very intricate cooperation of a type hitherto unknown among the authorities dealing with oil, gas and electricity and also those concerned with enforcing environmental standards.

TABLE 8.—RELATIVE DEPENDENCE ON OIL AND NATURAL GAS IN VARIOUS REGIONS OF THE UNITED STATES, 1971

Region	Trillion of British thermal units		Million of British thermal units per capital	
	Oil	Gas	Oil	Gas
New England	2,351	264	196	22
Middle Atlantic	5,389	1,903	143	51
East north-central	4,351	4,209	107	103
West north-central	2,027	2,084	122	126
South Atlantic	4,175	1,581	134	51
East south-central	1,274	1,210	98	93
West south-central	3,000	7,417	152	376
Mountain	1,133	1,251	133	146
Pacific	3,259	2,551	121	95
U.S. total	30,570	22,819		
Averages			148	111

Source: Department of the Interior, Energy Fact Sheet, 1971.

SUPPLY SHORTFALLS

At the level of a broad market assessment, shortfalls of imports and domestic production have equivalent effects on the prospects of shortage. For an aggregate assessment, therefore, we need not distinguish between these two aspects of supply but may simply sum their deviations from the projected levels. At a regional level, the impact of each situation will differ.

Table 9 displays the pattern of inventory depletion and the resulting shortages induced within PAD Districts I through IV for various combined shortfalls of production and imports assumed to continue throughout the heating season. Table 10 indicates the significance of the projected shortages in terms of percentages of total distillate use in the shortage months.

All forecasts of the distillate oil market for next winter show that unprecedented imports will be needed to bridge the large gap that otherwise will exist between projected demand and supply. There is a distinct possibility, however,

that these imports will not fully materialize. The consequences of a shortfall would be concentrated mainly on the East Coast.

Possible obstacles to adequate imports include not only the potential curtailment of exports to the United States by crude oil exporting countries, but also the scarcity of oils sufficiently low in sulphur to meet anti-pollution requirements in many areas of the United States, the suppression of some suppliers' incentive to import by price controls, the possibility of heating oil scarcity in Europe stemming from unusually cold weather there, and potential shortages of shipping.

TABLE 9.—INVENTORY DEPLETION AND DELIVERY SHORTAGES UNDER VARIOUS SHORTFALLS OF SUPPLY IN PAD DISTRICTS I THROUGH IV

[Inventories are in millions of barrels; shortages are in parentheses in thousand barrels per day]

Shortfalls of production plus imports (thousand barrels per day)	1973 [1]			1974			Inception of inventory shortage
	November	December	January	February	March	April	
0	210	201	167	137	112	98	Mar. 10
−50	209	197	162	130	104	86	Feb. 11
−100	207	194	158	124	(−107) 97	80	Feb. 4
−150	206	191	153	118	(−360) 91	73	Jan. 26
−200	204	188	148	(−84) 112	(−532) 90	70	Jan. 21
−250	202	185	144	(−289) 105	(−593) 88	66	Jan. 16
−300	201	182	139	(−494) 99	(−653) 86	63	Jan. 12
Minimum adequate inventory	(2)	(2)	124	(−698.8) 120	(−713) 107	(2)	(2)

[1] Oct. 1 inventories are assumed to be 192,000,000 barrels.
[2] Not applicable.

TABLE 10.—DELIVERY SHORTAGES AS PERCENTS OF TOTAL DISTILLATE USE IN PAD DISTRICTS I–IV AND IN LIKELY SHORTAGE AREAS [1]

Supply shortfall and month	Total for PAD districts I–VI	Shortage-prone regions			
		Total	New England	New England plus Mid-Atlantic	Upper Mid-west
−50 thousand barrels per day: March	3	5	21	7	55
−100 thousand barrels per day: March	10	16	70	24	186
−150 thousand barrels per day:					
February	2	3	14	5	39
March	15	24	103	35	275
−200 thousand barrels per day:					
February	7	11	48	16	133
March	17	27	115	39	307
−250 thousand barrels per day:					
February	12	19	82	28	228
March	18	29	127	43	338
−300 thousand barrels per day:					
February	17	27	115	40	323
March	20	32	138	47	369

[1] Regions are defined as in table 2, p. 9 above.

U.S. crude oil imports from the Arab states ran at about 950 thousand barrels per day in the first half of 1973. This volume of crude could yield some 300 thousand barrels per day of distillate fuels. Since the recent abolition of quota limits on U.S. oil imports, however, these numbers are increasing rapidly. There is no way to predict to what extent this oil will continue to flow, but there is no reason to believe that it will be constricted within the next six months.

About three-fourths of the distillate fuel imported into the United States comes from Venezuela, Canada and the Caribbean (mainly the Virgin Islands and the Netherlands Antilles). Some of this is refined from Arab crude. Although these imports are relatively safe from political threats, crude oil supply constraints in Canada and in Venezuela will not permit them to increase very fast. Most of the increase in U.S. imports of oil products probably will come from other areas, mainly Western Europe.

Europe possesses the capacity to refine an estimated 800 thousand to 1 million more barrels of crude oil per day. If fully exploited, this capacity probably could produce around 300 thousand barrels of distillates. Low-sulphur crude, however, has become increasingly scarce in Europe just as in this country. Imports of low-sulphur African oil have declined by more than 20 percent since 1970, while imports or relatively high-sulphur Middle-East oil have increased by over 40 percent. Additional crude oil from Europe's refineries, therefore, would be largely of high sulphur content, and its products would not meet the environmental standards of many U.S. markets. Unlike American refineries, moreover, European refineries yield 35 to 40 percent residual fuel, and there will be little incentive for them to process additional crude for its distillate and gasoline fractions unless markets can be found for the large volume of high-sulphur residual associated with it.

It has been speculated by one authority that U.S. distillate oil imports will fall short of needed levels by 200 thousand barrels per day next winter unless the sulphur content permissible in the main urban areas of the Northeast United States is raised at least temporarily from levels around 0.3 percent to 0.5 to 0.7 percent.[1] If such an import shortfall should prevail throughout the heating season, the resulting delivery shortage can be gauged on a nationwide basis from Table 9. Its implications for New England and the Mid-Atlantic States, which would bear the brunt of this shortage, are indicated in Table 10.

U.S. price controls on oil products pose another obstacle to importation, especially by operators with little or no domestic supply. The controls permit the higher cost of imported oils to be averaged into each firm's total inventory cost to establish the firm's ceiling price. Including the very high present cost of obtaining additional shipping capacity, however, imports now cost about twice as much as equivalent domestic oils. Thus, a firm importing only 10 percent of its supplies would be permitted to sell all of its oil at a ceiling price of about 1.1 times its ceiling price for domestic products. A firm importing half of its supplies would have a ceiling price equal to the mid-point between domestic and foreign prices, but it would face the risk of being underbid by the first firm, and therefore of being unable to sell at all at prices adequate to recoup the cost of importing. A firm that must import all of its supplies would be permitted under the controls to price at the full cost of imports but would be in an even more vulnerable position so long as competitors have domestically produced oil. Therefore, firms are deterred from importing more than a small percentage of their total volume of products for fear of raising their costs to an uncompetitive level. Without controls, all prices would tend to rise to the cost of the highest-cost (i.e. imported) supplies.

In particular, this aspect of price control deters imports by independent oil distributors whose supplies from domestic refiners have been sharply curtailed or cut off. This disincentive is illustrated by the behavior of independent distributors in the Northeast, who are reluctant to import for this reason and whose inventories are expected to be some 5 to 8.5 million barrels (circa 40 to 70 percent) below normal at the beginning of October.

It seems to be an implication of the price control regulations described above that the major domestic refiners will have to do the importing of products. It remains to be seen whether they will import enough before and during the heating season to cover the Nation's winter needs, and whether they will sell oil to the independent distributors that own a large share of the retailing facilities in the Northeast. If these imports do not materialize and the shortfall in the Northeast is made up by allocations from other parts of the United States, the reduction in inventories would advance the arrival of shortages (in the case of normal weather) from around March 10 to late February. The shortage on this account could run up to 4 percent in March over all districts. If supplies are diverted to the Northeast only to the extent that they are surplus to the needs of other areas, however, the shortage would be concentrated in New England and possibly the Mid-Atlantic States. In this case the shortage would be drastic; it could run up to 25 percent in New England or up to 9 percent if both regions are affected.

The discussion above deals with constraints on imports posed by U.S. regulations. Other constraints may arise in the exporting and transportation of the foreign supplies. Large U.S. imports of oil products from Europe are a new phenomenon and already have driven spot prices there up very sharply. The continuation of voracious American demands will have a pervasive effect on fuel

[1] Petroleum Industry Research Foundation, Inc., "The Outlook for Distillate Heating Oil in the Winter of 1973–74," July, 1973, pp. 8–9.

prices in Europe. If unusually cold weather should strike there, actual shortages might occur. In such a case, it may be assumed that the affected countries would act to restrain exports.

Finally, the market for shipping capacity to haul both crude oil and refined products is very tight, because of both the rapid rise in U.S. long-haul crude imports from Africa and the Middle East and the sudden boom in U.S. imports of gasoline and fuel oil from Europe and elsewhere. Rates for spot charters are in the range of three times the level regarded as normal.[1] The threatened constriction of Libyan crude exports, whether by the Libyan government or as a result of legal actions by the companies, would result in much increased requirements for tankers to haul additional oil around Africa from the Mideast.

In summary, winter oil scarcity in Europe and tanker scarcity make it somewhat doubtful that the projected average of 500 thousand barrels per day of distillates can be imported and make it unlikely that imports will be able to cover any additional demands arising from the causes discussed in earlier parts of this section.

POTENTIAL REFINERY SHUTDOWNS

It is impossible to predict what areas may be affected by refinery breakdowns or unforeseen shutdowns for maintenance. It seems safe to presume, however, that some unexpected interruptions of production will occur, because many refineries have been running at abnormally high rates without maintenance for many months. The basic projections used in this analysis allow for 3 to 4 percent of the refining capacity in PAD Districts I through IV to be out of commission at any time. If mishaps resulting in greater down time should occur, they would have to be assessed in terms of their timing, duration and regional significance by interpolating from the information in Tables 9 and 10.

APPENDIX

TABLE A.—THE DISTRIBUTION OF THE TYPES AND USES OF PRIMARY FUELS IN THE UNITED STATES IN 1971

[Percents of total btu's]

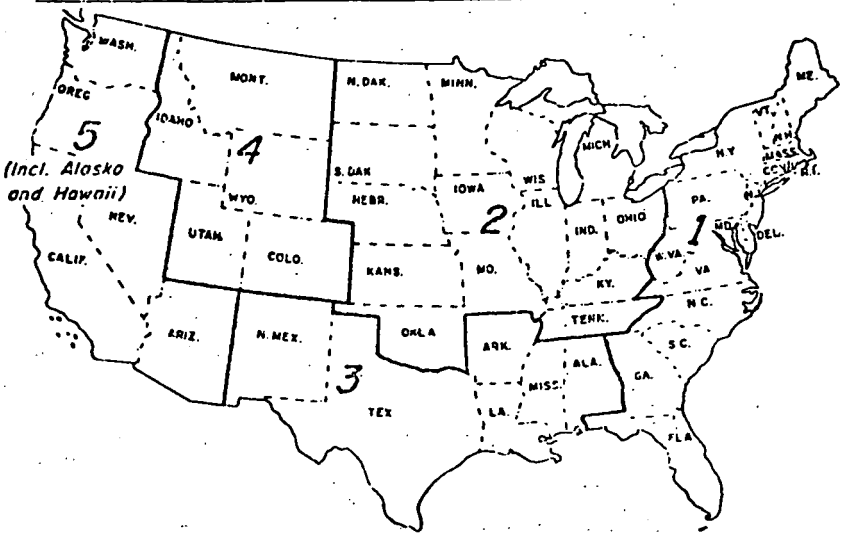
	Coal and lignite	Petroleum products	Natural gas	Hydropower and nuclear	Total gorss inputs
Household	0.4	7.3	10.7	0	20.6
Industrial	6.1	7.4	15.3	0	28.9
Transportation	0	23.7	1.1	0	24.8
Electric power	10.7	3.7	6.0	4.6	25.0
Miscellaneous	.2	.3	0	0	.5
Total	17.5	44.5	33.3	4.6	100.0

Source: Department of the Interior, "Energy Fact Sheet, 1971," pp. 6 and 7.

[1] See world scale index citations published weekly by Mullion Tanker and Ship Brokers, Limited, London.

MAP 1

PETROLEUM ADMINISTRATION FOR DEFENSE (PAD) DISTRICTS



THE OUTLOOK FOR DISTILLATE HEATING OIL IN THE WINTER OF 1973–74

(By the Petroleum Industry Research Foundation, Inc.)

SUMMARY OF FINDINGS

For the second consecutive year we approach the winter with the likelihood that heating oil supplies will be insufficient to meet demand. Last winter a shortage was averted as a result of a very mild 1st quarter—approximately 10% warmer than normal—following a 6% colder than normal 4th quarter.

Had the 1st quarter been normal, the additional increase in demand would have reduced distillate stocks by more than 20 million barrels which would have resulted in widespread shortages.

Our calculations show that—after adjustment for a decline in secondary stocks at the East Coast—we will enter the coming heating season with stocks only slightly higher than a year ago. Since demand is expected to be up by over 6% and since last year's comparable stock level would have been clearly insufficient for a normal winter, the distillate heating oil supply outlook for next winter is quite precarious, notwithstanding the apparent high level of current primary stock accumulation.

If the winter is even slightly colder than normal, if the substitution of distillate fuel oil for curtailed gas supplies is significantly larger than last year, if refinery runs cannot be sustained at an average rate of 92% of capacity over the next 9 months or if the level of imports falls 3–4% below our projected average volume of 500,000 b/d during the heating season, a shortage could be expected to develop. To prevent, or at least contain, the shortage, the government must take several steps in advance of the heating season. These would include imposition of mandatory product allocation so that available supplies of heating oil are evently distributed throughout the market, encouragement of maximum imports by permitting a full pass-through of the substantially higher cost of foreign oil; and raising the permissible sulfur level of all distillate imports to 0.5–0.7%, since the available quantities of foreign oil with a lower sulfur content are insufficient to meet our projected import requirements.

An analysis of the above findings is found in the following pages.

HISTORIC GROWTH

In the past two years, distillate demand increased at an average annual rate of 7%—more than 3 times its average growth during the previous five years (1964–69). This reflects the sharp rise in the requirements of peripheral distillate fuel

oil markets—electric power plants and natural gas customers with alternate fuel facilities. The effect of the increase in electric utility demand on total distillate fuel oil demand is shown below.

TABLE I.—DISTILLATE DEMAND, I–IV

[Thousand barrels per day]

	Percent	1970	Increase	1971	Increase	1972	Annual increase
Utility	3	66	+26	92	+52	144	+48.0
Other	97	2,242	+63	2,305	+192	2,497	5.5
Total	100	2,308	89	2,397	244	2,641	7.0

OUTLOOK FOR 1973 HEATING SEASON

Table II below shows the actual distillate supply-demand position for the 1st quarter of 1973 and projections for the subsequent four quarters.

TABLE II.—DISTILLATE SUPPLY-DEMAND PROJECTION, DISTRICT I–IV

[In thousands of barrels per day]

	1973					1974, 1st quarter
	1st quarter (actual)	2d quarter	3d quarter	4th quarter	Year	
Crude runs [1]	10,359	10,483	10,600	10,545	10,498	10,495
Distillate yield	25.17	22.40	22.75	24.0	23.6	24.75
Output	2,607	2,348	2,410	2,530	2,473	2,598
Plant	5	5	5	5	5	5
Imports	531	200	175	450	338	550
Net to V	−13	−25	−20	−20	−19	−20
Supply	3,130	2,528	2,570	2,965	2,797	3,133
Demand	3,567	2,230	1,885	3,250	2,730	3,900
Stock (mmbls)	(−39.3)	(+28.0)	(+13.0)	(−26.2)	−24.5	(−69.0)
Stock end quarter (mmbls)	102.1	130.1	193.1	166.9		97.9

[1] Includes net unfinished oil.

We are projecting an increase in demand of 6.2% over the comparable period of the year before—with distillate demand averaging 3,571,000 b/d for the entire heating season. The increase is about in line with the increase in the last heating season after adjustment for degree day differential.[1]

The stock levels in Table II are the balancing items in our projection. The 97.9 million barrels figure shown for the end of the heating season will be equal to about 25 days of 1st quarter demand. This would be the lowest ratio in more than a decade. Thus, the stock levels shown in Table II do not assure adequate supplies in the 1st quarter of 1974. On the other hand, these stock levels would probably be sufficient to minimize a shortage. The question is therefore whether it is likely that the supply projections in Table II will be attained and the demand projections not exceeded. As is shown in the following paragraphs, this is by no means certain. In the absence of specific government actions it may even be considered unlikely.

(1) In the past the industry has estimated the maximum sustained utilization of refining capacity at 92%. This rate has been used in our projection. Currently U.S. refineries are running at a higher rate. In a major attempt to resolve the gasoline shortage refineries during the past several weeks have been operating in excess of 95% of capacity.[2] It is not known how long the industry can continue to operate at this rate. Several refineries that should have come down for normal maintenance were not shut down this summer. Last year the industry experienced several breakdowns. It is conceivable that the stress placed on refineries this

[1] The 1972/73 season was colder than the previous one.
[2] Crude runs to refinery capacity excludes NLG's etc.

summer due to the high operating rates and the higher average sulfur content of imported crudes could result in additional unscheduled downtime during the next eight months.

(2) We have assumed that '73–74 winter will be normal. If it turns out to be only 3% colder, demand would increase by more than 75,000 b/d—and stocks at the end of the 1st quarter would be drawn down by an additional 14 million barrels. To make up this shortfall refineries would have to operate at a sustained crude throughput rate of 95%. Since this is unlikely, a heating oil shortage during the first quarter would probably develop.

HEATING SEASON DEMAND—PAD I–IV

[Thousand barrels per day]

		Stocks, end 1st quarter (mm barrels)
A. Normal winter	3,571	97.9
B. 3 percent colder	3,648	83.9

(3) Even if the weather is normal, our demand projection in Table II could prove conservative. This is due to the uncertainty surrounding the extent of the *natural gas shortage* this winter—and the effect it will have on distillate heating oil demand. Firm gas curtailments[3] last winter (November–March) totaled 565.6 billion cuft. Based in part on data presented by the Federal Power Commission to the Cost of Living Council it can be projected that approximately 27 percent of this shortfall was replaced by distillate fuel oil—the equivalent of 26 million barrels. Given an FPC projection of a firm gas shortfall of 670.2 billion cuft for this winter the equivalent distillate requirement would amount to 31 million barrels as illustrated on the following page.

FIRM GAS CURTAILMENTS—WINTER (NOVEMBER-MARCH)

	1972/73, billion cubic feet	Million barrels	1973/74, billion cubic feet	Million barrels
Met by—				
Distillate	152.7	26	181.0	31
Residual	260.2	41	308.3	49
Other fuels and unmet demand	152.7	----	180.9	----
Total	565.6	----	670.2	----

A large portion of the shortfall last year was met either by other fuels or remained unmet. If customers this winter attempt to have all their needs met and other fuels are not available, distillate demand could be considerably higher than projected, as a result of the firm gas shortfall.

In addition, there is virtually no information on the volume of distillate and residual fuel oil consumed as a result of gas curtailments to interruptible users.

(4) Another problem this winter not generally encountered in the past is that *secondary stocks are currently very low*, relative to primary stocks,[4] and will likely remain so into the heating season. This would affect our estimate of a minimum safe working inventory of primary stocks, since it assumes a normal relationship between secondary and primary stocks.

A survey of the expected stock levels of most East Coast independent terminal operators indicates that they expect to go into the heating season with inventories some 9 million barrels below what they consider normal—about 70% of physical storage capacity.

[3] Excludes gas curtailments for interruptible gas users.

[4] Primary stocks are those carried by refiners and pipelines. Only primary stocks are reported to the API and are the basis for inventory calculations both by the API and the Bureau of Mines. Stock figures in Table II are primary stocks.

STOCKS OF INDEPENDENT TERMINAL OPERATORS, DISTRICT I AS OF SEPTEMBER 30

[Millions of barrels]

Expected L level	Desired level	Short fall	Capacity
3.5	12.05	8.55	17.5

On September 30, 1972 the combined stock levels of this group was 8 million barrels which was then considered insufficient for a normal winter. This projected shortfall in stocks is serious since the independent terminal operators account for approximately 25% of District I distillate fuel oil sales (and 40% of New England's sales). In a number of markets distribution facilities are predominantly controlled by Independents. If these marketers are short of oil their customers will be, too, even if the overall level of primary stocks appears adequate. It is for this reason that mandatory governmental allocation of available supplies are required. In the absence of such allocation there is a considerable possibility of sporadic shortages next winter.

(5) Table II projects an import level of 500,000 b/d during the six month winter period and while 531,000 b/d did come in during the 1st quarter of 1973, it is likely that a portion of that volume had been stored offshore in expectation that restrictions on imports would be relaxed. Furthermore, European distillate stocks were unusually high last February as a result of a very mild winter. Thus, the record imports of the first quarter are no indication that this level can be maintained throughout next winter.

(6) Another factor which could well impede imports of distillate fuel oil is the statutory sulfur content of this product. In a growing number of markets in the Northeast, air pollution regulations require a maximum sulfur level of 0.3 or 0.2 percent for distillate heating oil. Next October sulfur levels will be lowered in Philadelphia and both counties of Long Island. U.S. supplies can generally meet the lower sulfur levels without difficulty. However, foreign distillate heating oil—particularly European products—cannot. Most European product has a sulfur level of 0.5% or slightly more. In the first quarter of this year the U.S. brought in 200,000 b/d of distillate from Europe and other Eastern Hemisphere sources of which only about 25% had a sulfur level below 0.5%. This winter our demand for this type of product will be significantly higher while Europe's supply will be lower since low-sulfur African crude oil shipments to Europe are on the decline while high-sulfur Middle East shipments are rising, as the following table shows.

WESTERN EUROPEAN CRUDE OIL IMPORTS

[Millions of barrels]

	Percent	Low sulfur, African	High sulfur, Middle East	Total
1970	45	1,665	2,072	3,737
1971	36	1,415	2,494	3,909
1972	31	1,332	2,950	4,282

If the U.S. is to import 500,000 b/d of distillate oil, in excess of 200,000 b/d will have to come from Eastern Hemisphere sources (primarily Western Europe). This can only be accomplished if the sulfur levels of imported distillate could be temporarily raised by means of legal waivers to about 0.5–0.7% in areas where statutory limitations require a lower sulfur content. Since about ⅔ of East Coast distillate supplies will be of domestic origin and, hence, can probably meet the more stringent sulfur level requirements, a waiver on the sulfur levels of imports would not significantly increase air pollution.

(7) Another way to increase distillate imports would be to temporarily *relax stautory sulfur levels of residual fuel oil.* The entire increase in residual fuel oil imports into PAD I during the next heating season—about 125,000–130,000 b/d—will be in the sulfur level category of 0.5% and less.

This type of residual fuel oil is qualitatively very close to distillate fuel oil. Most of it is made in Caribbean export refineries from a mixture of 65–75% low-sulfur Africhan crude and 25–35% Venezuelan or other high-sulfur crude.

In the second half of last year 450–500,000 b/d of low-sulfur crude oil was imported into the Caribbean for this purpose. This year the volume of this crude oil required to meet East Coast low-sulfur residual fuel oil demand is likely to be 150–200,000 b/d higher, according to industry estimates.

If residual fuel oil levels in all East Coast areas where the statutory limit is below 1% could be raised to 1% for the heating season, this would permit the importation into the U.S. of significant volumes of distillate heating oil which otherwise would go into the production of low-sulfur residual fuel oil. While it is difficult to determine the magnitude of this volume, a rough estimate would be 100,000 b/d.

The raising of residual fuel oil sulfur levels in the U.S. would also permit the substitution of high-sulfur Middle East crude for low-sulfur African crude in Caribbean refineries, with the result that some of the freed low-sulfur crude could be imported into the U.S. In this connection, the National Petroleum Refiners Association has estimated that 350,000 b/d of U.S. refining capacity is idle because of inability to obtain low-sulfur crude oil, the only usable feedstock for certain domestic refineries. If this capacity could be activated it would yield up to 95,000 b/d of distillate fuel oil.

(8) The *substantial current price differential between imported distillate oil and domestic contract cargo supplies* could also impede maximization of imports.

Historically, imported distillate fuel oil has generally been lower priced than the domestic product. This relationship prevailed until the late fall of 1972. At the beginning of last year's heating season, the landed price of distillate heating oil (excluding duty) ranged from 9.0¢ to 9.5¢/gallon, while the domestic cargo contract price stood at 10.9¢/gallon.

Since last December this relationship has drastically changed. The landed price of the foreign product ranges currently from 21.5¢ to 23.5¢/gallon, while the domestic contract cargo price is 12¢/gallon. Thus, the imported product is now nearly twice as expensive as the domestic product purchased under contract.

Under these circumstances marketers with substantial deficits between contractual supplies and total requirements are reluctant to import distillate fuel oil, since this would render them uncompetitive with marketers able to draw primarily on domestic supplies, such as integrated refiners and their contract customers. The current relatively low level of imports is evidence of this reluctance. More foreign oil could be imported than is actually the case. But despite inadequate inventories, independent cargo buyers are fearful of bringing in a product whose landed cost approaches the prevailing retail price to ultimate consumers.

Permission by the Cost of Living Council to average the cost of foreign and domestic supplies in the determination of resale prices does not significantly alleviate the problem for marketers with a preponderance of import requirements.

In an uncontrolled market, prices would tend to rise to the level of imports. Under the existing system of controlled domestic prices, this is of course not possible. Thus, the attempt to protect the cosumers from price increases may aggravate the shortage, unless a way can be found to distribute the higher cost of imports evenly among all marketers than is presently the case.

APPENDIX

1972—DISTILLATE FUEL OIL DEMAND

[In thousands of barrels per day]

	1st quarter	2d quarter	3d quarter	4th quarter	Year
District:					
I	2,040	1,088	736	1,735	1,396
II	1,112	741	623	1,049	883
III	281	238	321	280	278
IV	68	80	83	96	84
I–IV	3,501	2,147	1,763	3,160	2,641

Statement Submitted by Gordon Haglund of Minnesota

I should like to begin by thanking this Committee and particularly Senator Humphrey for providing this opportunity to amplify Governor Anderson's presentation of the critical problems facing the independent marketers of petroleum

products and their consumer customers. As a spokesman for the National Oil Jobbers Council, I am representing 13,000 branded and unbranded jobbers—small businessmen who purchase commodities like home heating oil and gasoline, primarily from domestic refineries, and then retail those products directly to homes, apartments and businesses or resell them to independent retail filling stations. Our independent position in the petroleum industry makes us and our customers especially concerned about the heating oil shortages predicted for this winter and the inexplicably discriminatory Phase IV economic controls for petroleum products.

SHORTAGES

As independent marketers, we and our customers are confronted by two shortages. There is a real increase in demand for petroleum products which has reached and may well exceed our supplies this winter. But in addition there is also a shift of product away from the independent marketing column and into the direct outlets of the refiners. This second shortage is best exemplified by gasoline tax figures reported in several states where gasoline jobbers are on allocation but the majors' direct sales through their own retail outlets are up greatly from last year. Much the same thing is beginning to happen this fall in fuel oil. This second shortage may well be an attempt to capitalize on the real shortage just beginning to develop.

Both shortages conditions can be rectified fairly by a mandatory allocation program for distillates this winter and then perhaps similar controls on gasoline next summer. If every wholesale customer is allocated 100% of his 1972 volumes, adjusted for differences between current and 1972 weather conditions, then any contrived shortage will disappear and any real shortage can be equally shared. To do this with a minimum of government interference, the program must govern inter-refinery sales. While the eight largest refiners often correctly contend that they do not supply independent wholesalers, the recent FTC report showed that they do make net exchanges with other refiners who, in turn, supply independent marketers. These interrefinery distribution patterns must be restored to insure a minimum of newly assigned suppliers and to insure equity to all levels of the system.

Other forces are contributing to our supply problems. Utilities are buying new large volumes of home heating oil so that they can meet environmental standards. To whatever degree these standards can be relaxed, there will be proportional increases in supplies this winter. But in the long run, the utilities must be required to burn other fuels and apply stack scrubbing technology to make these fuels comply.

Finally, the Cost of Living Council has discouraged the importation of foreign crude and products by allowing only a pass-through of the difference between current costs and May 15 costs rather than the full difference between domestic and foreign costs. As a result, foreign products may well be sold in Europe to earn the full world price. If mandatory allocation regulations forced the majors' direct outlets to share in the shortage, there would be now incentive to bring that oil into this country.

PHASE IV

The nation's shortage problems are being compounded by the administration's economic controls which threaten to eliminate the independent segment of the industry by forcing them to subsidize the integrated major refiners.

The most immediate threat to our consumers is the administration's failure to force the major refineries to apply equally to all wholesale customers the increased cost of foreign products (for Minnesota, note especially the new Canadian prices) and crude oil. Recently, many majors have been passing their increased costs for foreign products on to their independent customers while applying none of the costs in their own price structure. The result has been an obliteration of the lower prices which their greater efficiency permitted independents to charge. In fact, prices to some independent marketers are so high that even their greater efficiency is not enough to keep their posted price equal to the majors' direct sales price. The result is disproportionately higher prices to consumers who happen to be served by independents.

Many small communities and rural customers have no other supplier and must therefore, pay the unfair higher price. And those customers who can and have switched to direct major outlets are, while making a perfectly correct individual economic decision, guaranteeing the death of the only competition. Once we and our competing efficiency are gone, these consumers will have no choice

but to pay the oligopoly price. To apportion fairly the present unequal burdens of foreign costs and to prevent further concentration, the Cost of Living Council must force major refiners to reflect their share of import costs in their own prices. To date, only one refiner believes the present regulations mandate this equity so the rule must be clearly stated and vigorously enforced.

The administration's petroleum regulations discriminate against the independent marketers in several other ways. Major refiners are permitted to post May 15 prices (plus increased cost of product incurred up to August 1) at their direct outlets and can, therefore, earn the normal markups which prevails on that date. But independent jobbers and retailers must use markups taken from the depressed markets of January 10. The Cost of Living Council has partially recognized the inequity of this January date by providing a floor of 7¢ for retail markups, but why did they not simply treat us all equally? If the COLC contents that the majors earned no more on May 15, why didn't they share our date in January? And if the multi-national integrated petroleum companies did earn more on May 15 as our market data and the P & L statements suggest, then why can't the small businessman earn those normal reutrns? Gentlemen, I hope you and your fellow statesmen will demand an answer to these questions, while there are some independents left to save.

Yet another inequity in the Council's program is the combined effect of a virtual freeze at the retail level coupled with built-in price increases for new crude production. The result is that price increases which add to the already record-breaking profits of the major integrated refiners and crude producers must be absorbed by their independent small business competitors. Moreover, the regulations require that independents absorb non-product cost increases while simultaneously specifying the procedure by which a major integrated company may pass on these same costs. If the national interest truly requires retail ceiling prices on that tiny part of the cost of living which depends on petroleum products (1% of the index), then surely it also requires the same ceiling on the prices the retailers pay for their product. But if the nation must have more crude, as I personally believe, then the nation must pay the price in dollars rather than by squeezing the only remaining competition until it dies. If we destroy competitors like myself now, tomorrow's prices will be truly uncontrolled.

In 1962, Congress charged the executive agencies with a duty to do all they could to preserve small businesses. The freedom each individual has to start and operate such an enterprise is one of the most important differences between our modern free economy and the socialist system. Let, the Cost of Living Council has ignored this charge by promulgating the inequities I just discussed largely against small businesses. Instead of preserving the small business exception in prior phases, the Council has carefully aimed this deadly program at the hearts of small businessmen. We are confronted not only by discrimination but also by reporting requirements, forms and incredibily complex regulations which the Council itself has great difficulty in explaining, let alone justifying.

Yet despite all this, the Council has no where issued any special exceptions procedure. In the courts, they argue we do not exhaust out administrative remedies and they promise liberal exceptions. But at the same time they make no effort to help the small businessman by issuing a single modest specialized form with which to seek this specific exception. With this obstacle to administrative remedies and the courts asking that we use those remedies first, you, sirs, are our only remaining hope.

The Congress must act quickly to enact mandatory allocations of all distillates so that our homes will be at least equally cool this winter and the Congress must move to amend the Economic Stabilization Act to forbid the shocking inequities perpetuated in Phase IV.

NATIONAL FEDERATION OF INDEPENDENT BUSINESS,
September 24, 1973.

HON. HUBERT H. HUMPHREY,
Chairman, Subcommittee on Consumers, Joint Economic Committee, New Senate Office Building, Washington, D.C.

DEAR SENATOR HUMPHREY: The National Federation of Independent Business welcomes this opportunity to present a statement on Phase IV oil regulations for inclusion in the hearing record of your Subcommittee. The Federation is the largest single member business organization in the United States and has in its membership over 355,000 small and independent businessmen. Over 20,000 of our members are fuel oil and gasoline jobbers and retailers. It is on behalf of these small and independent petroleum jobbers and retailers that we submit this statement.

This statement will not dwell on whether or not economic controls are or can be effective in maintaining a stable economy with little or no inflation. The Federation addresses itself in this statement of the reality that our economy is operating under the Phase IV controls. More specifically, we address ourselves to a harsh reality that Phase IV controls as they relate to the petroleum jobber and retailer are blatantly discriminatory and unjust. The current oil regulations are inequitable and work to the severe detriment of a major segment of the small business community.

The inequities of the Phase IV oil regulations focus on three areas. First, to permit suppliers of petroleum products to increase their prices to jobbers and retailers and to deny the jobbers and retailers an opportunity to immediately pass on the price increases is blatantly discriminatory.

In the case of number two fuel oil, the retailer must absorb price increases until the following month and in the case of gasoline, the retailer must absorb the price increase with no relief whatsoever. Such action singles out the petroleum retailer to bear the financial burden of retail price maintenance.

Senator, the retailer, in most cases, is a very small businessman and the one who is least able financially to bear this burden. Why should this small businessman, under the American system of equal treatment under the law, be denied by Government edict the opportunity to pass on manufacturer price increases which are forced on him. We can see no economic justification to single out the petroleum jobber and retailer to bear this burden.

Secondly, to require that the petroleum jobber and retailer determine their mark-up as of January 10th and to permit the manufacturer to determine his mark-up as of May 15th results in further discrimination. Prices on January 10th were depressed as compared to May 15th as a result of gas price wars in many areas of the country. Therefore, May 15th is a much more favorable date on which to compute the retailer's mark-up. There is absolutely no difference in the economic function rendered by the manufacturer-owned retail station and the leasee retail station. They are in direct competition with each other. Therefore, the manufacturer-owned station should not be given an economic advantage over the leasee station merely by virtue of a different type of ownership.

The third inequity is that petroleum jobbers and retailers are denied the small business exemption from Phase IV controls. This exemption is extended to almost all other small businessmen. Why is the petroleum retailer again singled out for discriminatory treatment? We recognize that the petroleum retailer has a high profile in the market place and that gasoline prices are part of the consumer price index calculation. However, we can see no economic reason why the small business exemption is denied this segment of the small business community. In short, there is absolutely no reason why a group of businessmen should be arbitrarily singled out for discriminatory treatment merely because of their high public profile and high consumer interest in their product.

Mr. Chairman, petroleum jobbers and retailers are, for the most part, not economists, however they know when they see or experience something that is economically discriminatory. Such is the case with petroleum jobbers and retailers. In the past two weeks, the Federation has been deluged with letters, phone calls, telegrams, and delegations of jobbers and retailers protesting the unfairness of the oil regulations. Such an out-cry must be recognized and reckoned with.

It is evident to the business community that the Cost of Living Council, while being extremely courteous in their contact with the business community, has taken inadequate action to halt discrimination against petroleum jobbers and retailers. Consequently, any solution to this problem must come from the Congress. We urge the members of your Committee to focus the attention of Congress on the inequities and the injustices contained in the oil regulations. It is only through Congressional effort and action, in our opinion, that this situation will be rectified.

Mr. Chairman, on behalf of the over 20,000 petroleum jobber and retailer members of the National Federation of Independent Business and their counterparts

throughout the country, we appreciate this opportunity to present their views and their position relative to the Phase IV oil regulations.

Thank you for your continuing interest in the welfare of the independent and small business community.

Respectfully submitted.

FREDERICK L. WILLIFORD,
Director of Government Affairs.

MINNESOTA TURKEY GROWERS ASSOCIATION, INC.
St. Paul Minn., September 18, 1973.

To Senator Humphrey and Members of the Joint Economic Committee:

GENTLEMEN: Minnesota is the largest turkey producing state in the nation, and in 1973, Minnesota raised over 23 million turkeys. This represents $100 million paid to our Minnesota producers.

Minnesota is located in the upper Midwest, and as many of you know, may at times during the winter have extremely cold weather. The mean temperature for December is 11.3°F., January 5.5°F., February 10.0°F., and March 28.0°F.

The Minnesota Turkey industry has changed drastically from ten years ago, when the majority of our poults were started in late February, March, April and May, to year-round production. This effectively utilizes our labor, hatcheries, growing facilities, and processing plants and transportation.

At the same time we have changed from range production to confinement growing in heated, well insulated buildings, with automatic equipment such as waterers, feeders, heating and ventilation.

The Minnesota Turkey industry uses, for the most part, L.P. gas for brooding because of the convenience and the cost. Some of these turkey buildings may have up to one hundred stove units of 30,000 B.T.U.'s each.

Our industry uses about 25 million gallons per year for brooding and growing; or about 1 gallon per turkey produced.

At the request of Mr. Duke Ligon from the Gas and Oil Division of the Department of the Interior, we made a survey of all our turkey growers in August. Replies to the survey were received from about 50 of the 450 growers. These growers produce about 60% of the turkeys for our state, and reported that they use almost 10 million gallons of L.P. gas for their operations.

Turkey poults require a room temperature of 95° Fahrenheit for the first five days, and then the temperature may be dropped a few degrees each week until a temperature of 55° is maintained. The turkey industry must have assurances that they have a continuous, uninterrupted supply of L.P. gas for brooding and growing. Any interruption in zero weather for only a few hours, may cause the young birds to die or suffocate when they huddle together to try to keep warm.

At the suggestion of our State Civil Defense Office, turkey producers have filled their tanks to capacity to take advantage of the supply that has been available during the summer months, but this is not enough to carry them through the fall and winter season.

As of this date, very few turkey producers have been given assurances that they will have an adequate supply for the fall and winter months and we need these assurances before poults will be started for the winter and spring of 1974.

Consumption of turkey meat is about 9.0 pounds per capita, and if our industry is going to continue to provide turkey meat for the American consumers, the producers must have L.P. gas to heat the buildings for their baby turkeys.

We urge that some method be devised to give units of Agriculture which are in food production for the American consumer, the assurance and priorities necessary to these important segments of Agriculture, the L.P. fuel supply necessary to continue to produce food necessary for our expanding population.

Enclosed are the fuel requirements by months necessary for the Minnesota turkey industry.

Thank you for hearing our side of this very critical problem.

Sincerely yours,

ROY C. MUNSON, *Executive Secretary.*

Enclosure.

Fuel requirements to brood the Minnesota turkey crops based on 1972 hatch and fuel requirements

[Gallons of fuel required (propane gas)]

Month:	
January	2,550,600
February	3,488,310
March	4,388,850
April	3,514,310
May	2,905,400
June	827,760
July	606,720
August	438,720
September	829,440
October	1,571,430
November	2,327,400
December	2,430,000
Total	25,878,940

NOTE.—To supply consumer demand for turkey there should be a 15-percent increase in the 1974 crop over 1972. This would require an additional 3,881,841 gallons of fuel for Minnesota.

INDEPENDENT GASOLINE MARKETERS COUNCIL,
Washington, D.C., August 6, 1973.

Hon. HUBERT H. HUMPHREY,
Federal Court Building,
Minneapolis, Minn.

DEAR SENATOR HUMPHREY: This is to inform you of the disastrous consequences of the proposed Phase IV Regulation to independent gasoline retailers.

Under the proposed Regulation, a gasoline retailer has a freeze high established by adding his January 10, 1973, margin to his August 12, 1973, cost. Hypothetically, a margin of 5¢ and a cost of 30¢ results in a freeze high of 35¢ per gallon.

The first hardship results from the choice of January 10. The CLC chose it because prices were then relatively depressed. Since that time, retail prices have increased largely because the supply available to independent price competitors has been reduced to 50% to 60% of normal supply. This is not coincidental.

An example of the price competitor's economics in January and June is as follows:

	January	Jun
Gallons	100,000	50,000
Margin	$0.05	$0.07
Gross profit	5,000.00	3,500.00
Expenses	4,000.00	4,000.00
Profit or (loss)	1,000.00	(500.00)

Under the proposed regulation, with low volume and low margins, the numbers look like this:

Gallons	50,000
Margin	5¢
Gross profit	$2,500
Expenses	$4,000
Profit or (loans)	($1,500)

Price competitors will be destroyed

The second hardship results from a retailer not being allowed to pass on an increased cost of gasoline. However, the refiners and distributors who sell to retailers are allowed to pass through certain additional costs of product. For example:

	As of Aug. 12	After increase in cost
Retail freeze high	$0.35	$0.35
Cost of product	.30	.32
Gross margin	.05	.03

This is what can be done to preserve price competitors:

1. Restore supply to price competitors through a mandatory allocation system.
2. Revise Phase IV to permit a margin as close to June 8 as possible.
3. Permit gasoline retailers to pass through cost increases.

Every 1¢ per gallon reduction in the retail price of gasoline saves this nation's public over one billion dollars annually.

Please help keep price competitors alive!

Respectfully,

KEN CATMULL.

INDEPENDENT GASOLINE MARKETERS COUNCIL,
Washington, D.C., August 23, 1973.

Hon. HUBERT H. HUMPHREY,
Minneapolis, Minn.

DEAR SENATOR HUMPHREY: On Thursday, August 9th, Governor Love announced that the Nixon Administration would continue to ignore the disastrous impact of oil shortages upon independent marketers.

It is, therefore, predictable that the major oil companies will be encouraged to take another step toward the elimination of the private-brand competitor, and thereby deny the American people the right to "buy independent."

Our national consumer policy seems to be based upon the proposition that the people can buy all the gasoline and heating oil they may want, so long as they buy it from the right companies.

National oil policy apparently supports the fully integrated, major oil companies as the "favored few."

There are only about twenty majors that are fully self-sufficient, but they alone have the assurance of in-house sources of supply, allowing them to market about 80 billion gallons of finished products each year.

The independent marketer should sell as much as 20 billion gallons through as many as one thousand companies, but, unfortunately, their sources of supply all depend upon the preservation of a "competitive market that is free of restraints."

It is in the marketplace that the adverse impact of Governor Love's policy will be felt because the favored few now control about 80 percent of all gasoline sold in the United States and will control more and more as the independent competitors disappear.

The vital 20 percent that flows through the independent, price competitive channels is recognized as that influence which "keeps the market honest."

On Thursday, August 9th, Governor Love announced that the Nixon Administration would not even listen until September 10th. Come that date, the Independent Gasoline Marketers Council sincerely hopes that the voice of Congress will be heard.

Until then, the independent price competitor will simply do his best to "cling to the cliff."

Sincerely,

DEAN WALCUTT.

INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION,
Washington, D.C., September 7, 1973.

Subject: Mandatory Allocation Program and Increased Supplies of Home Heating Oil:

In recent weeks, Federal energy policy officials have stated that "allocation schemes . . . do not increase supply."

This is not correct.

Given the current state of the domestic and foreign markets and the Phase IV price regulations, *a mandatory allocation program will: Increase the supply of No. 2 fuel oil available to U.S. consumers. Reduce the price of that product in the Northeastern states.*

The impact of a mandatory allocation program would be as follows:

Increased supply

Domestic refiners are currently planning to supply most of their domestic demand from their domestic refineries.

Independent terminal operators and other independent marketers are, as a consequence, apparently expected to purchase the major portion of their requirements from foreign sources.

These independents do not have extensive overseas organizations, foreign refineries, foreign crude oil production, foreign tanker fleets or vast financial resources. Since they are not integrated internationally, they do not have preferential access to foreign crude oil and refined product production of their own affiliates, as do the majors. Thus, unless there is a mandatory program the independents will be able to buy less oil than the majors, will be forced to pay higher prices, and will face a severe supply gap caused by the short-fall in domestic deliveries.

If there is a mandatory program, domestic refiners will be required to provide a substantial portion of their domestic production to independent marketers to fill this gap. As a result, a supply gap may be created in their own system; in order to fill this gap the refiners will have to enter the world market to purchase additional supplies.

However, because of their greater buying power and access to overseas supplies (in large measure from their own overseas affiliates) the refiners will surely be able to purchase and import the quantities of No. 2 fuel oil required to meet the demands of their own systems and the demands of independents they must supply under the allocation system. In fact, there are strong indications that the major international refiners are presently buying and storing substantial quantities of No. 2 fuel oil (gasoil) that they could, if required, ship to the U.S. market.

In helping to meet total U.S. No. 2 fuel oil needs these majors may not enjoy an optimum economic return, but their performance in dealing with the supply disruption caused by the 1967 Suez crisis demonstrates that—if they are forced to do so—the majors can exercise enormous flexibility and ingenuity in meeting supply problems through their world-wide operations. And while it may not be the optimum, they will make a substantial profit on sales to the U.S.

In sum, the allocation system will force the importation of additional quantities of No. 2 fuel oil—by those companies who have control of supplies and are in the best position to do the importing—and thus increase total supply avialable to U.S. consumers.

Lower prices

As indicated, under current conditions—without a mandatory system—independent deepwater terminal operators and other independent marketers are apparently expected to bear the burden of importing substantially more No. 2 fuel from foreign sources than in the past years.

Under the new Cost of Living Council rules, the importer may average the cost of these high priced imports over his entire inventory. However, most independents handle smaller volumes and serve more limited market areas than the major refiners.

Imported heating oil is currently much more costly than domestic. Thus, as the proportion and quantity of imports by independents increases, the prices paid by their customers will rise sharply.

Since most imports will naturally flow into the Northeastern states, customers of independents in that area will be forced to bear almost the entire burden of higher cost imported No. 2 fuel oil. In effect, there will be a two-price system within the United States—a high level for the Northeast and a lower level for the remainder.

In contrast, as indicated above, under a mandatory allocation system, the proportion of imports by independents would be lower than under current conditions; the imports by refiners, higher.

However, the refiners would be permitted, under CLC regulations, to average the cost of the imported heating oil and in doing so, would spread the costs over a much larger inventory base and in most cases, throughout their national marketing system.

Thus, a mandatory allocation system would eliminate the two-price system or, at the least, sharply reduce the price differentials, and provide substantially reduced costs for consumers of fuel oil in the Northeastern states.[1]

INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION,
Washington, D.C. September 7, 1973.

To: Governor John A. Love, Director, Energy Policy Office.

Subject: Supply Problems—East Coast Independent Deepwater Terminal Operators (Report #4).

On July 6, August 8, and August 21 in response to the request of the Energy Policy Office, the Independent Fuel Terminal Operators Association submitted reports of inventory levels during July and August.[2] In accordance with our desire to keep the Federal Government fully informed, the Association submits herewith a report of current inventories and supply problems.

1. Inventories, September 1

Our current inventories of home heating oil are as follows:

NO. 2 FUEL OIL INVENTORIES

[Net, in barrels]

	Aug. 15, 1973	Sept. 1, 1973	Desired stock level—Oct. 1[1]	Total storage capacity
New England (7 companies)	1,290,000	2,045,000	4,590,000	6,550,000
New York City area (6 companies)	600,000	760,000	3,860,000	5,520,000
Total, northeast (13 companies)	1,890,000	2,805,000	8,450,000	12,070,000

[1] 70 percent of total capacity. This is a conservative requirement; if tanks were filled to 80 percent of capacity, a greater margin of safety could be provided to meet peak demand needs.

2. Fuel shortage

It is clear from these inventory figures that the stocks of independent deepwater terminal operators in the Northeast are not building to levels sufficient to meet next Winter's demands. *Particularly disturbing are stocks in the New York City area, which have remained at very low levels throughout the summer.*

The figures provide further confirmation of the fact that this year the "summer fill"[3] has not taken place, and we approach the start of the heating season in an alarming position.

Unless our storage tanks are filled to at least 70% of capacity by October 1, a fuel oil shortage will almost surely occur in the areas we serve.

3. Mandatory allocation program

In order to reach 70% of capacity *more than 5.5 million barrels of No. 2 fuel oil must be moved into independent storage in the Northeast over the next month—a build-up of nearly 1.5 million barrels per week.*

This will not take place unless you move immediately to institute—and make effective—a mandatory allocation program which will require domestic refiners and their foreign affiliates to deliver No. 2 fuel oil to independents.

The voluntary allocation program has been a failure. The alarming inventory levels and supply prospects outlined herein offer ample proof of this fact. Few refiners have cooperated with the voluntary program; most have, despite encour-

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[1] It should be noted that 60% of the nation's heating oil is consumed in the Northeastern states; and each 1 cent increase in the price of heating oil costs the consumers of New England an additional $50 million per year, and the consumers of New York an additional $50 million per year.

[2] The Association is composed of 16 companies who operate deepwater oil terminals along the East Coast from Maine to Florida. None is affiliated with a major oil company. Members market No. 2 fuel (home heating) oil, No. 6 (residual) fuel oil and gasoline at the wholesale and retail level. Members of our Association market at wholesale nearly 25% of the No. 2 fuel oil consumed in District I (the East Coast from Maine to Florida) and 40% of the No. 2 fuel oil consumed in New England. A list of members and more detailed description of the Association is enclosed (Attachment A).

[3] This is the process which in past years has raised inventories to near capacity levels *before* the onset of cold weather.

aging public statements, simply refused to comply. Most of the refiner-suppliers who have provided oil to the members of our Association on an annual basis over the past 5 to 15 years have refused to maintain their supply contracts or delivery levels. No deliveries are scheduled or promised from these suppliers over the next few weeks, much less the next year.

4. Individual company problems

At your request, the members of our Association recently submitted to you analyses of their specific supply problems.

Since the date of submission of this data attempts have been made to encourage domestic suppliers who provided No. 2 fuel oil to independent deepwater terminal operators during 1972–73 to deliver the same quantities during 1973–74. Despite your efforts, which we appreciate, there has been no change of position on the part of any domestic refiners. Those who were willing to provide product prior to mid-August are still willing to supply the product. Those who have cut off or sharply reduced deliveries to independent deepwater terminal operators continue to refuse to restore or increase those deliveries.

In brief, the failure of the refiners to cooperate with your efforts-offers strong evidence of the need for a mandatory allocation program to assure adequate supplies for the independent sector of the market and the consumers they serve.

5. Essential role of independents

As we have indicated, independent deepwater terminal operators handle 25% of the heating oil volume along the East Coast—and 40% of the volume in New England. We move that oil through a massive and expensive distribution system, involving docks, storage tanks, pipelines, racks, inland storage facilities, and fleets of trucks.

There is no substitute for this system; it cannot be magically replaced on short notice by the major oil companies or by Government order. Simply stated: over the next heating season we will perform an essential function which no one else can. And, *if our distribution systems are not fully supplied, the millions of homeowners who rely on us for heating fuel will go cold.*

Thus, unless you act immediately, it may be too late. Unless refiners are required to move substantial quantities of No. 2 fuel oil into the independent distribution and storage system over the next month and subsequent months, no amount of emergency action by you next fall or winter—including rationing—will avoid a serious shortage.

A year ago, the Federal Government, despite our repeated warnings, assured the public that No. 2 fuel oil supplies were ample and there was no cause for concern. This projection was acknowledged to be wrong by early December; at that time some emergency steps were ordered, but is was only the arrival of unseasonably warm weather in January that prevented a major national catastrophe. Unfortunately, the failure of the Federal Government to recognize the danger and act in time did cause severe heating oil shortages in many areas last winter.

A crisis can be avoided this winter—if prompt, effective action is taken.

ARTHUR T. SOULE,
President.

ATTACHMENT A

MEMBERS

INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION

Belcher Oil Co., Miami, Fla.
Burns Bros. Preferred, Inc., Brooklyn, N.Y.
Cirillo Bros. Terminal, Inc., Bronx, N.Y.
Colonial Oil Industries, Inc., Savannah, Ga.
Deepwater Oil Terminal, Quincy, Mass.
Gibbs Oil Co., Revere, Mass.
Meenan Oil Co., New York, N.Y.
Northeast Petroleum Corp., Chelsea, Mass.
Northville Industries, Corp., Melville, N.Y.
Patchogue Oil Terminal Corp., Brooklyn, N.Y.
Ross Terminal Corp., Bayonne, N.J.
Seaboard Enterprises, Inc., Boston, Mass.

Southland Oil Co., Savannah, Ga.
C. H. Sprague & Son Co., Boston, Mass.
Webber Tanks, Inc., Bucksport, Maine.
Wyatt, Inc., New Haven, Conn.

The companies listed above own or control terminals capable of receiving ocean-going tankers; none is affiliated with a major oil company. All are qualified to participate in the No. 2 fuel oil program established under Section 2(a)(1) of Presidential Proclamation 3279, as amended, and Section 30 of the Oil Import Regulation, under which 50,000 b/d of home heating oil is presently being imported into District I (the East Coast). The members of the Association are independent marketers of No. 2 fuel oil, No. 6 fuel oil, gasoline and other petroleum products.

Members of the Association distribute 40% of the No. 2 fuel oil consumed in New England, and more than 20% of the No. 2 fuel oil consumed along the East Coast (District I). Metropolitan Petroleum Company (a subsidiary of the Pittston Company), a nonmember, is an independent who markets an additional 3–4% in District I.

The independent share of the total East Coast market for No. 2 fuel oil, at the terminal level, is approximately 25%; the remaining 75% is controlled by refiners.

Of the nation's No. 2 fuel oil consumption (for heating purposes), New England accounts for 20%. New York, New Jersey and Pennsylvania account for 35% and the remainder of District I accounts for 10%. Thus 65% of the nation's No. 2 fuel oil is consumed in District I.

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