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DEPARTMENT OF INTERIOR

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NATIONAL PETROLEUM COUNCIL

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U. S. DEPARTMENT OF INTERIOR

NATIONAL PETROLEUM COUNCIL

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Departmental Auditorium
Tuesday, July 9, 1966
9:30 A.M.

JAKE L. HAMON, CHAIRMAN

C O N T E N T S

P R O C E E D I N G S

CHAIRMAN HAMON: Members of the Petroleum Council and Guests, please come to order.

The first item on the agenda is the roll call. Vince, will you read the roll call, please.

MR. BROWN: Mr. Abernathy.

MR. ABERNATHY: Here.

MR. BROWN: G. M. Anderson.

(No response)

MR. BROWN: Robert O. Anderson.

MR. BRADSHAW: Bradshaw for Robert Anderson.

MR. BROWN: Thank you, Mr. Bradshaw.

Mr. Baldridge.

MR. BALDRIDGE: Here.

MR. BROWN: Mr. Bass.

MR. BASS: Here.

MR. BROWN: Mr. Batzell.

MR. BATZELL: Here.

CHAIRMAN HAMON: Mr. Batzell, as is the custom of the new members of the Council, will you stand up? This is Elmer E. Batzell, a very prominent attorney in Washington, who has been a long time, great help to us in the petroleum industry. Welcome aboard, Mr. Batzell.

(Applause)

MR. BROWN: Mr. Bennett.

MR. BENNETT: Here.

CHAIRMAN HAMON: Mr. Bennett, will you stand, please. This is Carroll Bennett, President of the Texas Pacific Oil Company, Dallas, Texas. He not only runs a great outfit but he is a great golfer.

(Applause and laughter)

MR. BROWN: Mr. Bergfors.

MR. BERGFORS: Here.

MR. BROWN: Mr. Bible.

MR. BIBLE: Here.

MR. BROWN: Mr. Blaustein.

(No response)

MR. BROWN: Mr. Borger.

(No response)

MR. BROWN: Mr. Boyd.

MR. BOYD: Here.

MR. BROWN: Mr. Brazell.

MR. BRAZELL: Here.

MR. BROWN: Mr. Brockett.

MR. BROCKETT: Here.

MR. BROWN: Mr. Bruce Brown.

MR. BRUCE BROWN: Here.

MR. BROWN: Mr. George Bruce.

MR. BRUCE: Here.

MR. BROWN: Mr. Buck.

MR. BUCK: Here.

MR. BROWN: Mr. Burlingame.

MR. BURLINGAME: Here.

MR. BROWN: Mr. Burns.

MR. BURNS: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Burns. This is Mr. John Burns. He is the Chairman of the Board of Cities Service Oil Company. We are very happy to have you with us this morning as a member of the Council.

(Applause)

MR. BROWN: Mr. E. S. Calvert.

(No response)

MR. BROWN: F. Allen Calvert.

MR. JAMISON: Minor Jamison for ~~Albert~~ Allen Calvert.

MR. BROWN: Mr. Casey. Was present - Ed

(No response)

MR. BROWN: Mr. Chambers.

(No response)

MR. BROWN: Mr. Chandler.

MR. CHANDLER: Here.

MR. BROWN: Mr. Citrin.

MR. CITRIN: Here.

MR. BROWN: Mr. Cranmer.

(No response)

MR. BROWN: Mr. Doan.

(No response)

MR. BROWN: Mr. Donnell.

MR. DONNELL: Here.

MR. BROWN: Mr. Eckis.

MR. ECKIS: Here.

MR. BROWN: Mr. Elliott.

(No response)

MR. BROWN: Mr. Erickson.

MR. ERICKSON: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Erickson, please.

This is Elmer Erickson, President of the Northwestern Refining Company. Coming from up in Northwest, the cold country, it is a little warm for him down here but we will try to have better climate next time. Welcome aboard, Mr. Erickson.

(Applause)

MR. BROWN: Mr. Follis.

(No response) Observed Mr Vice was late

MR. BROWN: Mr. Force.

MR. FORCE: Here.

MR. BROWN: Mr. Fox.

MR. FOX: Here.

MR. BROWN: Mr. Getty.

MR. RAMSFORD: Jim Ramsford for Mr. Getty.

MR. BROWN: Mr. Gonzalez.

MR. GONZALEZ: Here.

CHAIRMAN HAMON: This is Richard Gonzalez, formerly Secretary-Treasurer-Director of the Humble Oil Company, and noted economist. He has been most helpful in deliberations of the Council. He headed the task force on the National Oil Policy and we are very honored to have you as a member of the Council.

(Applause)

MR. BROWN: Mr. Goodrich.

MR. GOODRICH: Here.

MR. BROWN: Mr. Graham. was present later

(No response)

MR. BROWN: Mr. Haider.

(No response)

MR. BROWN: Mr. Hamon.

MR. HAMON: Here.

MR. BROWN: Mr. Harper.

MR. HARPER: Here.

MR. BROWN: Mr. Hartley.

MR. HARTLEY: Here.

MR. BROWN: Mr. Hope.

(No response)

MR. BROWN: Mr. Howell.

MR. HOWELL: Here.

MR. BROWN: Mr. Hurd.

MR. HURD: Here.

MR. BROWN: Mr. Ikard.

MR. IKARD: Here.

MR. BROWN: Mr. Jackson.

MR. JACKSON: Here.

MR. BROWN: J. Paul Jones.

MR. JONES: Here.

MR. BROWN: Mr. Kantzer.

MR. KANTZER: Here.

MR. BROWN: Mr. Keeler.

MR. KEELER: Here.

MR. BROWN: Mr. Kelly.

MR. KELLY: Here.

MR. BROWN: Mr. Kiltz.

MR. KILTZ: Here.

MR. BROWN: Mr. Koch.

MR. KOCH: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Koch. This is Walter R. Koch. He is an independent producer in Austin, Texas, President of the Texas Independent Producers and Royalty Owners Association.

(Applause)

MR. BROWN: Mr. Learned.

MR. LEARNED: Here.

CHAIRMAN HAMON: Will you stand up. Stanley Learned,

President of Phillips of Bartlesville, Oklahoma. Very happy to have you.

(Applause)

MR. BROWN: Mr. Levy.

MR. LEVY: Here.

MR. BROWN: Mr. Loomis.

MR. LOOMIS: Here.

MR. BROWN: Mr. Ludwig.

MR. LUDWIG: Here. Wood - was not present

MR. BROWN: Mr. McClure. Was present - left

(No response)

MR. BROWN: Mr. McCollough. Was present

(No response)

MR. BROWN: Mr. McCollum.

MR. ~~DANFORD~~ GLENN: Wayne Danford for Mr. McCollum. Wayne E. Glenn?

MR. BROWN: Mr. McCurdy.

MR. McCURDY: Here.

MR. BROWN: Mr. McGee.

BANISH: Phil ~~Banish~~ C. Bennett for Mr. McGee.

MR. BROWN: Mr. McGraw.

MR. McGRAW: Here.

CHAIRMAN HAMON: Will you stand up, Mr. McGraw, please.

Mr. McGraw, President of the Transcontinental Gas Pipe Line Corporation. Welcome to the Council, Mr. McGraw.

(Applause)

MR. BROWN: Mr. Majewski.

MR. MAJEWSKI: Present.

MR. BROWN: Mr. Marshall.

MR. MARSHALL: Here.

MR. BROWN: Mr. Mecom.

MR. MECOM: Here.

MR. BROWN: Mr. Miller.

MR. MILLER: Here.

MR. BROWN: Mr. Charles Murphy.

(No response)

MR. BROWN: Mr. Nickerson.

MR. NICKERSON: Here.

MR. BROWN: Mr. Nielson.

(No response)

MR. BROWN: Mr. Niness.

MR. NINESS: Here.

MR. BROWN: Mr. Parkes.

(No response)

MR. BROWN: Mr. Parten.

MR. PARTEN: Here.

MR. BROWN: Mr. Potter.

(No response)

MR. BROWN: Mr. Rambin.

MR. RAMBIN: Here.

MR. BROWN: Mr. Rather.

MR. RATHER: Here.

MR. BROWN: Mr. Ritchie.

(No response)

MR. BROWN: Mr. Robineau.

MR. ROBINEAU: Here.

MR. BROWN: Mr. Robinson.

MR. ROBINSON: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Robinson. Fred H. Robinson, Chairman of the Board of Panhandle Eastern Pipe Line. We are happy to have you.

(Applause)

MR. BROWN: Mr. Rodman.

MR. RODMAN: Here.

MR. BROWN: Mr. Rowan.

(No response)

MR. BROWN: Mr. Rutherford. was present - late

(No response)

MR. BROWN: Mr. Thomas Scott.

MR. THOMAS SCOTT: Here.

MR. BROWN: Mr. Wilton E. Scott.

MR. WILTON E. SCOTT: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Scott. This is Wilton E. Scott, President of the Tenneco Oil Company from Houston, Texas. We are very pleased to have you, Mr.

Scott.

(Applause)

MR. BROWN: Mr. Shumway.

MR. SPENCER: John Spencer for Mr. Shumway.

MR. BROWN: Mr. Smith.

(No response)

MR. BROWN: Mr. Spahr.

MR. SOMMER: Dick Sommer for Spahr.

MR. BROWN: Mr. Steiniger.

MR. HINTON: Mr. Hinton for Mr. Steiniger.

MR. BROWN: Mr. Strauss.

(No response)

MR. BROWN: Mr. Swearingen.

MR. SWEARINGEN: Here.

MR. BROWN: Mr. Taliaferro.

MR. TALIAFERRO: Here.

MR. BROWN: Mr. Thompson. Was present - see p. 13

(No response)

MR. BROWN: Mr. True.

(No response)

MR. BROWN: Mr. Vaughan.

MR. VAUGHAN: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Vaughan, please. This is A. L. Vaughan. He is President of the Natural Gas Processors Association. Welcome to the Council, Mr. Vaughan.

(Applause)

MR. THOMPSON: Van Thompson, I didn't answer the call.

CHAIRMAN HAMON: Van, will you stand up, please. Mr. Van Thompson of Dallas. He is President of the Aztec Oil and Gas Company. And unlike Mr. Carroll Bennett, he really is a good golfer.

(Applause and laughter)

CHAIRMAN HAMON: Welcome.

MR. BROWN: Mr. Vaughey.

(No response)

MR. BROWN: Mr. Vockel.

(No response)

MR. BROWN: Mr. Wagner.

MR. WAGNER: Here. Not present

MR. BROWN: Mr. Warren.

MR. WARREN: Here.

MR. BROWN: Mr. Wells.

MR. WELLS: Here.

MR. BROWN: Mr. A. Earl White.

(No response)

MR. BROWN: John M. White.

(No response)

MR. BROWN: Mr. Whiteman.

(No response)

MR. BROWN: Mr. Winger.

MR. WINGER: Here.

MR. BROWN: Mr. Weather. was present - late

(No response)

MR. BROWN: Mr. Wright.

MR. WRIGHT: Here.

CHAIRMAN HAMON: Will you stand up, Mr. Wright. Mr. M. A. Wright, Chairman of the Board of Eumble Oil and Refining Company. He has moved recently from New York to Houston. And he says he likes our cool climate down there and we are delighted to have you as a member of the Council, Mr. Wright.

(Applause)

MR. BROWN: That completes the roll.

CHAIRMAN HAMON: Sometime or other, I am going to have a heart attack. Somebody is going to request that the past minutes be read in full before they are approved. But I hope that won't happen this morning.

May I have a motion to approve the minutes of the last meeting without them being read?

(Motion made and seconded)

CHAIRMAN HAMON: All in favor signify by saying "Aye."

(Aye)

CHAIRMAN HAMON: Thank you, you save me a heart attack.

Now, I am going to pass my remarks due to the length

of the agenda. I may have a few remarks after the nominating Committee's report comes in but I promise you they won't be long.

The next item on the agenda, I am going ask Secretary Cordell Moore, Assistant Secretary of Interior, to talk to us.

Cordell.

SECRETARY MOORE: Mr. Chairman, members of the National Petroleum Council, and I see we have a number of distinguished guests here. I am not sure that I am going to catch all of them.

I believe we have Mr. Tramell from the Atomic Energy Commission. I think Mr. Kruger was supposed to be here, but I don't believe he has arrived yet. Mr. Spencer from the Bureau of the Census, and Mr. Nemir from the Department of Commerce. Stanley Nemir, representative of the Secretary of Commerce, Department of Commerce.

I believe Paul Riley was supposed to be here. Did Paul arrive? Apparently not.

Lieutenant Colonel Fred Johnson, representing Stanley Rauer, the Secretary of the Army. Fred, would you stand? I have been on several programs with Colonel Johnson and I tell you, he does a splendid job of telling us what is going on in Vietnam.

Colonel Hagan, representing the Secretary of the Air Force. And Mr. Joseph Muir representing Vice Admiral

Schleef. Is Joe here? Oh, yes, he is here in the corner.

Captain Telder, representing Admiral Donaho, Commander ofMSTS. Commander Butterfield, is he here? Representing the Naval Petroleum and Oil Shale Resources, Bob Eastman, representing Mr. Durkee, Director of Civil Defense.

I believe we have several members of the Federal Power here this morning. Is Larry O'Connor here? Back in the back. Good to see you, Larry. Carl Bagley is supposed to be here. Carl, good to have you with us.

Louis Mendonsa, Bureau of Natural Gas and Water, Natural Gas Division. I don't know whether Vi Lodbell has arrived or not. He said he was going to try to get here this morning but apparently has not arrived.

John Lafferty, Chief of Food, Welfare and Food Resources.

We have John Oliver, Jules Wayne, from the Department of State. I believe he arrived, I can in with him. Glad to have you with us, gentlemen.

Burke Spivey from the Senate Committee on Small Business. Good to see you with us. And Stewart French. Stewart, you got here this time, last time you didn't.

POINT A

Gentlemen, it is a pleasure to see all of you here today. It was a pleasure to see most of you last night.

At the last meeting of the Council Secretary Udall spoke of the need for a review of our domestic oil and gas

supply prospects over the next 15 years, and announced the formation of a high level group to undertake a survey with such an objective. I am here this morning to give an account of the working details of that effort, and a summary of the progress it has made to date.

First, a matter of identities. The Survey will be conducted under the over-all responsibility and guidance of the Energy Policy Staff. This is a permanent committee composed of representatives from all bureaus and offices of the Department of the Interior having responsibilities in the energy field. Its chairman is the eminent geologist, Dr. William T. Pecora, present Director of the U. S. Geological Survey, and a member of the National Academy of Sciences.

How about waving your hand, Bill, so people can see what you look like? Bill is still asleep. He just got back from Alaska and he was waiting for darkness to come so he could sleep, but it never got dark. He also had a little difficulty getting back because of the airlines' strike.

Under the Energy Policy Staff, an ad hoc working task force has been formed under Admiral Ormie P. Lattu, Director of the Office of Oil and Gas, who is also a member of the Energy Policy Staff. Representatives from several agencies within the Mineral Resources Secretariat have been assigned to the task force, and arrangements have been made for assistance to be given the task force in specialized subject areas by other

offices within the Department. It will be the responsibility of Admiral Lattu's group to conduct the Survey and write the resulting report under the review authority of the Energy Policy Staff.

This administrative arrangement is, I believe, a significant commentary on theme, scope and balance of the survey. The prime focus will be on oil and gas, with special attention being given to the question of domestic resource adequacy. But it is quite evident that valid conclusions as to the future supply and demand balance of oil and gas cannot be made in isolation from other considerations affecting the demand and supply of competing sources of energy. This is especially true over any extended period of time such as we are considering in the Survey.

Our objective then, is an investigation of the outlook for both supply and requirements of domestic oil and gas within the larger setting of the total energy supply and demand picture. Petroleum supplies the largest part of our energy use, but we do not intend to lose sight of the fact that it is only a part, and that the forces of economics and technology have a way of changing -- often quite radically -- the roles played by the contenders in a competitive market system.

Although the Survey must be classified as an in-house effort, with full responsibility for its development and

conclusions resting with the Department of the Interior, we are very much concerned that it not be just another Government report. We want it to reflect the best thinking we can find among knowledgeable people.

With this in mind, we have asked the Council to study the industry's operations since 1950 to help us provide an analysis of the factors which cause the petroleum industry to take the decisions it did and pursue the courses it took during this period. We have all kinds of numbers which reflect the statistical record of wells drilled, survey crew months worked, expenditures made for exploration and development, oil produced by primary and by secondary recovery methods and other figures ad infinitum. These essentially describe results. We'd like to know more about the causes and reasons which produced these results, and we feel that there exists no more authoritative body than the Council to help us find the correct answers.

We shall also make full use of other Council studies relating to the industry's producing record. We are especially appreciative of your study just completed which gives us the Nation's producing capacity as of January 1, 1965, and projected to January 1, 1970. The study will be a welcome contribution to a vital element in a proper evaluation of the industry's capability to sustain future increases in petroleum demand.

Members of the working task force have received their

individual assignments, and are directing their efforts toward a September 15 deadline date for first draft submissions. These will in turn be carefully studied by other members of the task force, reworked as necessary and resubmitted at a later date. We plan for this review to be a rigorous and extensive one, to give an adequate test of the ideas and concepts generated in the papers examined. It will, therefore, be somewhat extended in the amount of time it requires.

We are, therefore, away from the post in our effort to ascertain the capability of our domestic supplies of oil and gas to meet the requirements of the next 15 years. We are approaching the job with confidence and enthusiasm, believing that the survey will provide timely and useful assistance to both Government and the petroleum industry, and yet with humbleness, too, knowing that there are limits to the value of any undertaking which purports to look for any distance into the future of our complex and rapidly changing world. But looking ahead, even at the risk of being in error to some degree, seems better than not looking at all. And we do so in gratitude for the clarity and detail provided by the studies, past, present and future, which this Council is so eminently well qualified to make of the petroleum industry and its operations.

Again, let me say it is a pleasure to see all of you, and to those distinguished guests who arrived while I was speaking, welcome to the National Petroleum Council meeting.

Thank you, Mr. Chairman.

(Applause)

CHAIRMAN MAMON: It is now my pleasure and privilege to present my Co-Chairman, the Honorable Stewart Udall, Secretary of the Interior.

SECRETARY UDALL: Thank you, very much, Mr. Chairman. It is a pleasure to be here this morning and to see that all of us survived the evening festivities last night.

Before I begin my prepared remarks this morning, I want to engage in a few personal comments. One of the real lasting pleasures of my office is the new friends that I make and one of the finest of these new friends the last two years or so has been Jake Mamon.

And in my judgment, Jake, I want to say to members of the Council here, that you have served with real distinction as Chairman of the Council. And were it not for the fact that I agree with you in judgment, you and others have expressed, it is probably a good idea to rotate the chairmanship, I would be quite willing to accept a motion that we approach it.

But, since --

(Applause)

I don't think we will ever have a better, more effective, more affable and agreement chairman and I just wanted you to know how I appreciate working with him and serving with him.

I also want to apologize to you and the members of the Council for my making a hit and run appearance this morning. I have a pretty good excuse. I have to be at the White House in a few minutes. And I do offer that excuse to explain my leaving when I finish my remarks.

I notice you have a very good agenda this morning. I think the reports are timely and I know the members of the Council will be very interested in hearing from Lee White, the new Chairman of the Federal Power Commission. Lee is an old friend of the Department's. He is wise in resource matters. And I think that all of you who are acquainted with him will be very much interested in hearing him speak this morning.

So I wish I could stay and participate, but I am delighted to see that you have a very timely schedule, and some reports on subjects that are of importance to the whole country.

I am going to discuss the water and air pollution problem with you this morning. I do this primarily because my Department has the new responsibilities in this field, as you know. The President, in one of the major reorganization proposal that he has performed in February, proposed that the water pollution control responsibility for the Water Pollution Research and Water Pollution grant programs, which formerly were the Health, Education and Welfare Department, the President proposed that they be transferred to Interior.

It seemed to us that this made a great deal of

sense because my Department has so many responsibilities for water quality programs, everything from the programs of the geological survey to the new water distillation program. There is no bureau in my Department that does not touch water some way or another and, therefore, we felt that this made sense and Congress concurred.

There was no resolution of disapproval even proposed and, therefore, the Department has a new and very valuable responsibility and it is one that touches many of the industries represented by members of the Council, and I wanted to spend a few minutes with you on this subject. Because it is one that is close to the President's heart. It is one that he has set high, new goals for the country, and I think it is important that we understand each other at the very beginning in terms of my Department's role in this field, what our hopes are and how we hope to work with you in this important area.

So I would like to begin my remarks with a quotation from a distinguished writer and city planner about a current problem.

"If atmospheric sewage was the first mark of paleotechnic industry, stream pollution was the second. The dumping of industrial and chemical waste products into the streams was a characteristic mark of the new order. Wherever the factories went, the streams became foul and poisonous; the fish died or were forced, like the Hudson shad, to migrate, and

the water became unfit for either drinking or bathing. In many cases the refuse so wantonly disposed of was in fact capable of being used; but the whole method of industry was so short-sighted and so unscientific that the full utilization of by-products did not concern anyone for the first century or so. What the streams could not transport away remained in piles and hillocks on the outskirts of the industrial plant, unless it could be used to fill in the water-courses or the swamps on the new sites of the industrial city."

This might sound like something you read in the Magazine section of the New York Times last week, but it isn't. It is a statement written by Lewis Mumford, a city planner, writing in 1930 about a condition that had attended the very birth of Western industrial society, and which has steadily worsened in direct proportion to the growth of our country.

The point I am making, of course, is simply that the problem of environmental pollution is not new. It began with the industries that produced waste, and this has been one of the constant challenges that American industry has faced. The new feature in the story is the encouraging fact that under President Johnson's leadership we have finally recognized that this is a big vital national problem that we must find solutions for as a condition for our continued prosperity and survival. It is the heart of the President's conviction that we can have a prosperous country, the most highly industrialized and highly

successful country and still be a clean country as well.

For nearly 360 years we have been steadily building a nation, organizing and exploiting an incredible inventory of natural resources to make ourselves the richest, most powerful people the world has ever known. We have buildings that rise a thousand feet into the air; planes that span the continent in four hours; automobiles---nearly one for every two people---that transport the average American family farther in an hour than George Washington could travel in a week---and in air-conditioned comfort to boot. We have poured out of our horn of plenty a flood of devices to ease the burdens of housewife and mill worker alike. This year we shall increase our gross national product in real terms by over $40 billion over that of 1965. No people on earth ever had more in the way of material comforts and conveniences; and no people on earth ever had to put forth less physical toil to enjoy it under our modern system.

We have come this far in only three centuries. We are indeed an affluent society and prosperious society.

But as you fly at 600 miles an hour toward any one of several of our major cities, the first thing that tells you of its presence is likely to be a pall of yellow haze that floats like a blanket between the city and the blue sky.

In the largest of these cities last summer you had to ask for a glass of water to go with your dinner. The waitress risked a fine if she provided it without your specific order.

In other cities the aroma of rotten cabbage and the sour taste on your tongue tell you of the proximity of a pulp mill or a chemical plant. In a hundred valleys of the Appalachians the corrosive leachings from coal mines poison the streams and everything in them. In the Great Lakes area, rivers warm to the touch, and loaded with human and industrial waste, threaten to make a second Dead Sea of Lake Erie, and seriously Menace ~~eminence~~ the lower portion of Lake Michigan. On our own doorstep you can admire the quiet beauty of the Potomac. But if you should fall into it, your wisest action would be to go get a typhoid shot.

We have come this far, too, in only three centuries. We are also an effluent society.

The truth is that there is a direct connection between affluence and effluents. Our material opulence is the product of an enormous conversion of natural resources to human use, accomplished through the interaction of technology and energy upon the raw products of the land. The inevitable by-product of this massive conversion is a vast amount of waste material which has no apparent economic use and which has to be disposed of in some manner. Our traditional way of disposing of the fluid portion of these wastes has been to pump it into the air or into the closest watercourse in the hope that a forgiving Mother Nature would somehow take care of it for us. And for many generations, she did. But no more. There are now so many of us, and our capacity to create pollutants is now so ~~so~~ extensive

that we can no longer trust the assimilative capacity of our air and water to absorb the unwanted residue of our industrial society.

In February of this year, the President announced his reorganization plan to transfer the Water Pollution Control Administration to the Department of the Interior. And last May 10, two months ago, this transfer became effective. It was, as I said at the time, a red-letter day in my five and a half years as Secretary. The legislative authority and the administrative structure are now available for an effective attack upon the formidable problems of water pollution at a truly national level.

Incidentally, there are some who express reservations about this transfer to my Department; giving us the responsibility for cleaning up the rivers of this country; because they said we were too close to some of the industries that were involved in some aspects of pollution; the coal industry, the petroleum industry; which we have already mentioned. The argument that I always gave back to those who raised this question when this was being considered by the Committees in Congress was that yes, we did have a close traditional relationship with some of the industries that were primarily concerned with extracting and developing the resources of our country, but that we had always tried to develop in our relationship with those industries not simply a blind championship of anything anyone in industry wanted to

do, but that we had always tried to develop in our relations with these industrial people, the conservation approach that our task and theirs was not simply to use up resources or to leave a mess for future generations, but to take that approach which represented the very best technology in any given time to be continuously trying to improve our technology, to improve our conservation practices.

And I pointed to such things as the fact that we had demonstrated many times over, that petroleum and gas could be extracted from areas in and near wildlife refuges without impairing the value of the wildlife refuge and that this would be the approach that we would take if this responsibility were given to our Department.

Apparently we sold this point of view, and this is the reason that I come to you today again to discuss it very frankly with you.

As a result of the Water Quality Act, we of the Federal establishment find ourselves in a new role. The water quality standards afford us an opportunity to extend our nation-wide effort beyond mere correction and into the area of prevention. The battle for better environment thus moves from a rearguard action to a forward attack. And we will not succeed unless we have your support.

The task is no longer just to clean up yesterday's mess, but to prevent tomorrow's from occurring at all.

The guidelines to the States have been established pursuant to the authority contained in the Act, and the response has been uniformly satisfactory. I have even detected a note of relief that the troublesome task of insuring equitable application of water quality standards is to be shouldered by the Federal government.

And we have Governor Dellmon with us today. I would like to make it very plain to him as a representative of the Governors, that the new legislation the President has proposed this year, and the whole thrust of carrying out enforcement responsibility, in our judgment, should ultimately be primarily a Federal and local responsibility.

I think that any law enforcement program works best, the closer it is to the people and to the problem. And we feel that there must be a residual authority in the Federal government to take action if no action is taken. Because when we start talking about the air and water, we are talking about resources that in most instances people of more than one state share.

Great rivers of our country don't pay much attention to State lines. They follow where nature and gravity tell them to go. And therefore, our philosophy and our approach will be that we want the States, we want people operating in river basins, to get up their clean-up programs and their enforcement programs and carry them out in a systematic way and we will act only when there is inaction, only when there is a failure

to meet the standards and goals that are generally agreed upon.

So these new quality standards which will come into effect a year from now will take into consideration several factors. One of particular interest to refiners and petrochemical manufacturers is your competitive position with relation to plants in other regions. In recognition of this problem, the Federal position is a reasonable one. It takes account of the economic feasibility of water quality requirements and sets up hearing procedures by which affected industries may state their cases for modification of proposed standards. We want to have full knowledge beforehand of what the likely effects of our contemplated actions will be. We do not intend for our enforcement practices to be hasty or ill-advised. But we do intend for them to be effective.

In this national water clean-up effort we need--we welcome--your help. Water and oil may not mix, but they certainly have a lot to do with one another, as all of us well know. I was amazed to learn recently of the tremendous volumes of water--most of it saline--that oil producers must dispose of in the course of their operations: 24 million barrels ~~of it~~ a day; a million barrels every hour; 3 barrels of water for every barrel of crude oil produced. I was also gratified by the manner in which your industry, working with State conservation authorities, is dealing with the problem: the protection of fresh groundwater strata by drilling, casing, completion and

abandonment procedures which insure that no brines or other contaminants are allowed to leak into fresh water aquifers; the reinjection of saline water into oil reservoirs to stimulate recovery--a double dividend for conservation; and the steady reduction of the amount of salt water being disposed of in surface pits. These are all developments that are good for conservation and good for the country and good for industry as well.

The oil industry's record of brine disposal is one of encouraging progress. But in 1969, over 2½ million barrels a day of salt water was still going into unlined pits and another million was going into streams and rivers. You still have a way to go, but your willingness and ability to progress in this area have been demonstrated, and I think we know now at least some of the directions in which solutions lie to these problems.

Oil processing operations also use huge amounts of water, with the possibility that the water returned to the streamflow may be contaminated by oil droplets, or by chemical wastes, even though in minuscule concentrations. The oil industry has done much in the past to reduce the frequency and extent of such occurrences, and the very large sums of money the refining segment has spent, and is spending, for the abatement of air and water pollution is a testament to the importance you attach to this effort.

I was delighted last year at the amount the American Petroleum Institute voted in new research money and the effort they are making, and I think that all along the line we have an awareness of the importance of these problems.

It was interesting to me to note that, in working closely with some of the states that are moving forward in a very bold and farsighted water conservation program, they are trying to predict and provide for the quantities of water that will be needed 25 years from now. And all of us know what we are up against in the water situation when we look at the national picture. If we don't plan ahead, we are sure to run into shortages and all kinds of problems that will inhibit growth and that will prevent the right types of growth from emerging.

It was very interesting to me working with Governor Connolly and his people. The State of Texas, of course, is the leading petroleum producer. It is also the State that because of its size, because of the diversity of its rivers, has many middle-sized rivers, many of them interstate. The State has undertaken a very broad and farsighted program of water planning. Of even moving water between basins, a very challenging Statewide plan is being developed.

But the thing that interested me most is that Governor Connolly, in approaching this problem, rather quickly came to the conclusion that you couldn't really have a water conservation program that was sound unless you also were

concentrating very heavily on preserving the water quality of streams. Because water runs downhill ~~those who use it~~, ... ← type these dots

~~communities or industries, if it goes back downhill~~ the quality becomes extremely important in terms of the next people who are going to use that water. And, therefore, the Governor decided very logically, that the people who were the water conservation planners and the people who were concerned with water pollution control should be the same people.

And Texas is one of the few states that today has already established a water control program with one man ~~wearing one single image~~ wearing the two hats of water pollution control responsibility and the water conservation planning responsibility. It seems to me that this is wise. It makes a great deal of sense and in fact from now on, we are no longer considering that any user of water, whether an industry or municipality, that the responsibility is something that can be divorced from the future of the State, or from planning for future needs. Because literally, when it comes to water, we are all in the same boat together.

Therefore, the action the oil industry has taken in the past to reduce the frequency and extent of contamination of streams, and the large sums of money the refining segment has spent and is spending for the abatement of the water pollution, ~~is an~~ are indications of the new steps that are being taken to conquer the pollution problem.

The cooperation of the refiners in the Chicago area, for example, in working with Federal, State and local officials in the effort to save Lake Michigan is another example of responsible civic action. Your initiative is appreciated. Your continued active support of and participation in pollution abatement actions is solicited.

Nobody expects the clean-up program to be cheap. Last year the people of New York State voted four to one for a billion dollar bond issue to clean up their rivers. And many more billions must be paid by other citizens in other parts of the country before we can begin to see the kind of results the President is aiming for. What makes the program appear so costly to us now is the fact that for a hundred years we have been skimping on the essential and legitimate costs of our material abundance. We have not been paying the piper for the action that we have been taking. We have failed to face up to the fact that the cost of clean-up, the cost of restoring the landscape for other uses, the cost of properly disposing of waste on a current basis, are all properly chargeable items in the price we should have been paying for our goods and services for many years gone by.

One of the big advantages if I may say so, [redacted] seems to me in terms of these water quality standards, ~~we are trying to finance, we want~~ is a comprehensible program of ~~standards~~, to have zoning in terms of rivers and of the quality of water in

rivers and I think that this makes a great deal of sense. But on the other hand, ~~if we can get roughly~~, it seems to me, if we can roughly have the same general standards in all regions of the country, this will put all segments of industry on what I call an equal footing basis so that in terms of action that is taken in total water pollution, ~~there~~ you won't find industry in one section of the country that is given an economic advantage because they are not having to act because they are in effect polluting rivers without having to take action. It is this development of a general common standard of the country that I think is going to put industry on the right kind of traditional competitive footing.

Let me ad-lib one other subject that may be of interest to you. I discussed this with the manufacturing chemists organization a few weeks ago. This is the question of taxing centers to encourage the problem. This is the subject that is being discussed in this city now and I hope some of you make your own contribution to that discussion. I am one who believes, and I think it is my job to argue it within the Administration as vigorously and effectively as I can, that there is a strong case for certain types of taxing centers. I have made my own final conclusions and I expect to do that soon on how I am going to argue that case but any of you that have ideas, I welcome them. And I think I can assure you we are going to make the argument. Whether we win it with the

Treasury Department is another matter. But it does seem to me that here is a subject, water pollution abatement, where essentially the performance of this function is something that we are doing to serve large social purposes for this country, serving national interests, and that therefore you have many of the ingredients right in the beginning of a sound motive and programs for taxing centers.

But we are giving this some attention and any thoughts you may have just pass them along to me or Secretary Moore. We would be very delighted to have them.

There is no reason, in our judgment, why the most prosperous nation in the world needs to be the dirtiest nation and the smelliest and shabbiest. We can surely create an environment worthy of our wealth, our talents, and our technical skill. We can have again the clean air, the clear streams, the sparkling lakes, the white unblemished beaches that have been so largely lost to us through generations of short-sightedness and neglect.

We meet on the common ground of concern for our environment. I think the big challenge is can we have a prosperous country, a country that develops the highest technological skill and also have a clean and fresh country as well. I think we can. The President thinks we can, and I would simply like to say in closing that I have been enormously encouraged these past two months, with the attitude of the

industry people in this country generally. I think there has been a change of heart in the last two or three years. I think that I find in talking to all kinds of people in industry, there is a willingness to move forward. I think everyone is a little bit concerned about how fast action should take place. Everyone is watching the other people in the same industry to see how fast they are moving and this is quite understandable.

But I am of the view that if we work together, that if the new legislation the President has asked for is approved, we are going to see a much faster pace of action all along the line, all over the country, within the next 18 months to two years. Because we are in the process right now of getting organized.

The petroleum industry in this country--and you have heard me say this before, and I feel very strongly about this--has because of its pioneering, because of the fact that it has commanded some of the best scientific engineering brains in the country, it has broken much new ground in terms of the conservation of oil and gas resources of this country. The techniques that you use today for conservation that were unheard of 30 years ago are quite remarkable. What the refining industry has done and can do in the future, in terms of using new technology, can perhaps even ultimately solve the auto exhaust problem in the refinery or much of the problem, and solve the problems of sulphur in the air by extracting by-products through the refining

process. There are so many things that can be done if we set out with the idea through research, through the development of new technology, to say that we will instead of throwing what we thought were waste products into the streams or into the air or onto the land, ~~that we will~~ wherever possible, produce new by-products and re-cycle our water where we can.

It is these things that are going to stretch the resources of the country. It is this type of new conservation that will in the long run, it seems to me, enable us to achieve this high goal of having a prosperous, industrialized country and clean country as well.

Thank you.

(Applause)

CHAIRMAN HAMON: I am now going to call on Jack Abernathy of Oklahoma City to introduce the next speaker.

MR. ABERNATHY: Mr. Chairman, Mr. Moore, Members of the Council, it is my great pleasure to get to introduce Governor Henry Bellmon of my Home State of Oklahoma.

I won't make this a very long introduction, I don't know why one introduces a governor anyway, however, I shan't attempt to do that. I will tell you a little about him, however, because it may help you evaluate what he says later.

Governor Bellmon was born on a farm at Billings, Oklahoma, and I guess still lives there. He was a First Lieutenan during World War II. He was a tank platoon commander. He went

through four active combat landing campaigns---the Marshall Islands, at Saipan, Tinian, and the famous one at Iwo Jima.

You know, he became interested in politics and was elected a State Representative in 1946, the Republic State Chairman in 1960, ran for and was elected Governor of Oklahoma in 1962, as our first Republican Governor.

As a very interested spectator of his performance in that office, it seems to me that he has done three things that are worthy of note. The first one is not limited to that necessarily, but these three have impressed me particularly. The first one is a great deal of progress in our State in financing really of education, particularly at the common school level. You know States are having difficulty raising money and Oklahoma is certainly no exception. You know we have really tended to have a rather one commodity tax base, namely, the petroleum industry, and it has been to a considerable extent through his efforts with the legislature and others, that have broadened that base and improved our educational financing.

On the subject of Secretary Udall's very fine comments dealing with water and air pollution, I think Governor Bellmon's appearance here today is well in point with that. He has taken the lead really among all the governors in this particular activity. For example, as a result of a resolution that he introduced which was adopted at the National Governors Conference a little over one year ago, I believe it was inJuly of 1965,

was it not, Governor, that called attention to this new effort on the part of the National Administration and encourage all governors to see to it that their states did what they could to participate in this effort and to, as Secretary Udall said, attempt to do the best possible job at the local and state levels.

His resolution was adopted and accordingly he was appointed chairman of the committee to do it. And he has implemented this in a great many ways. I don't know whether he will feel he has time to report to you on that or not, but I can assure you the Governor is in the very forefront at the state level of encouraging all states to do their full part and more in this whole water pollution problem effort directed in that direction.

Finally, I would say the thing that interested most of his constituents in the State most is the fact that Governor Bellmon has proved that in what has always been a one-party state, that the two party system does work. You see, he has been, as I said earlier, our first Republican Governor. He operated on a 6 to 1 deficit ratio in the legislature, 6 to 1 democrats versus republicans. Yet, I think it is fair to state he has had perhaps the most harmonious relationship with the legislature and the leaders of our legislature of any governor in recently memory, at any rate.

He has done a phenomenal job and an extremely constructive one. He introduced one additional thing that some

of you will find interesting. At the time he was campaigning, this impressed me, he presented his personal financial statement and he has audited it to the public and he has done that annually ever since. And by the way, I am glad to see being governor doesn't necessarily mean that you go broke. I will let you explain that if you care to.

(Laughter)

He and his charming wife Shirley and their three daughters live, when they are not at the Governor's Mansion in Oklahoma City, on about two thousand acres--actually it is 12 quarter sections if my mathematics is correct, that is 1920 acres, south of the Town of Billings in Noble County, Oklahoma, where he conducts a wheat and cattle operation.

The last time I checked with him, he carried about one hundred mother cows and anywhere from 100 to 300 calves, and most of them are pretty good cattle, most of you cowmen will be interested to know.

His wheat crop has been pretty good. I don't know how he manages it. Early this spring it hailed all around him and didn't hurt his wheat but since then everything has dried up but he got his harvested just before everything dried up.

So with that it is my great pleasure to introduce an executive of our state, Honorable Henry Bellmon, Governor of Oklahoma.

(Applause)

GOVERNOR BELLMON: Thank you, Jack.

Jake Hamon and Distinguished Members of the National Petroleum Council, Honored Guests, it is a real pleasure to be with you this morning and to hear those good words Jack had to say about me after I was elected. I wish I could have gotten him committed to that extent when I was running for office.

(Laughter)

It might have been quite a difference in Oklahoma.

I hope you noticed the fact that Jack introduced me as Oklahoma's first Republican Governor. We have a little game we play down in our State that sometimes helps me out and helps identify some of the folks I am working with. Our State is about four and a half to one Democratic by registration and this creates a problem because wherever I go, folks usually try to be kind to me and arrange for a Republican to make the introduction because they can trust that I am in safe hands if this situation exists, and it isn't always the case otherwise.

But I can usually tell if they have succeeded because if I am introduced as the State's first Republican Governor, I am sure a Republican is doing the honors, but if I am being introduced by a Democrat, I am introduced as the State's last Republican Governor.

(Laughter)

You can always tell how Jack stands, I am glad to know.

I would like to begin by saying that I greatly appreciated the opportunity to hear from Secretary Udall this morning and the remarks that he made. He has gone, but I would like to say to Secretary Moore, that Oklahoma, and I believe most other states, fully recognize the responsibility which State Government has in this field of assuring water quality and of doing what we can about air pollution and certainly we can do a great deal.

As Jack has mentioned to you, we have undertaken to see that State Governments do recognize the responsibility that we have here and also some of the time limitations which exist. Following the approval of resolution by the National Governors Conference, we sponsored a water quality criteria conference in Oklahoma, just about a month or six weeks ago. This conference was attended by representatives of most of our states. At that time we found that only about 31 of our 50 states had filed the required letters of intent with the National Government and I would like to suggest to you men that represent many states, that when you go back home, you check to be sure that your own State Government, your own Governor, has filed this letter of intent.

We have until October to do this, as most of you know, and then six months more to actually develop the criteria and the means of implementation. So it is highly important that states recognize their responsibility and their opportunity here

and that we not delay and cause the Federal authorities to move in this field, which has historically been a state responsibility, which I feel State Governments can handle provided we work with industry toward the objectives that we all have in mind.

I would like also to comment if I may at this time that Cordell Moore was in Oklahoma recently, and we thought we would try to impress him with the water development that is going on in our state so we took him out and showed him some of our lakes and some of the development in our river basins. And I thought as a way to cap it off we show him how well we stocked our lakes with fish. We failed on this little excursion, and, Cordell, I want to invite you back again and see if we can't get those lakes polluted with some fish at least of eating size.

You gentlemen have bestowed a great honor to me by your invitation to appear before this group representing the leaders of the American petroleum industry and officials of our Federal government concerned with petroleum programs and policies. Yet I realize that it would be foolhardy indeed for a governor to try to speak as an expert on the complex industrial colossus that is the oil and gas industry, or on the policies under which this great industry could best pursue its domestic and/or worldwide ends.

However, even though as Jack has told you, I am a farmer and only temporarily a politician--I might mention in our state a governor can't succeed himself so I am on my way out

of here in a few months--I am not an oilman, but as a native Oklahoman I have long felt close to, and identified with the petroleum industry. Oil has been an economic bulwark in Oklahoma since statehood. No Governor of Oklahoma could long serve without an increasing appreciation of the manifold blessings which flow to the state from a healthy, successful oil and gas industry.

By the way, I might mention also that I have another distinction I am very proud of. As far as I know, I am the only governor among the 50 who can look out of his office window and see a large collection of oil wells right on the State Capitol grounds.

Now, one of these oil wells as many of you men in the industry know, was brought out right under our State Capitol and from the wells that are on our Capitol property there, there have been produced about 20 million barrels of oil already and from this the state has had about $9 million of revenue. So if you doubt I am sincere when I say I have a real affection for the oil and gas industry, I hope you understand a little better why.

It is interesting to me that many of the tourists who come to our state and who come to our Capitol are more interested in the oil wells on the Capitol grounds than any other tourist attraction we have to offer. They seem to rival the cowboy hill fame and Will Rogers Memorial and a lot of other

things we have done for tourists, and certainly this indicates the great interest the ordinary citizens have in the oil and gas industry.

Any thoughtful public official, whether at the state or federal level, must quickly come to recognize the great contributions the petroleum industry has made and is making to our nation's development. The importance of an industry which supplies more than 70 percent of our energy needs to our economic well being and our national security cannot be over emphasized. Every citizen needs to recognize the constant need for the wisest, and most orderly development and use of our petroleum resources. My experiences as Governor of one of our great oil states has given me a particular sense of responsibility toward and appreciation of this great industry.

I would like to commend the members of the National Petroleum Council for the many significant contributions which this group has made toward the orderly development of the industry here in our country.

It is because the states and federal government have a joint concern in providing the kind of climate in which to maintain a healthy, expanding domestic oil and gas producing industry, that I am both pleased and honored to appear before this Council today as Chairman of the Interstate Oil Compact Commission, as well as Governor of Oklahoma.

In a sense, the National Petroleum Council in its

role of advisor to the federal government, and the Interstate Oil Compact, occupy a status of great similarity. Drawing on many talents from private as well as governmental sources, each provides a forum for the discussion of ideas and, hopefully, for development of sound policies. Both can give voice to sound concepts. Neither can directly implement its conclusions or recommendations. Yet, by advancing sound concepts and working toward their acceptance the Council in its 20 year history, and the Compact in its 31 year history have made contributios of great and lasting benefit to the American people, to the petroleum industry and to our state and federal governments.

In the role of advisors without portfolio, as the National Petroleum Council and the IOCC have been for so many years, it goes without saying that recommendations must be based upon reason and prudence, and backed by consensus. The excellent National Oil Policy report, adopted by the Council in its March 1 meeting, is an example and the result of putting these concepts to work. I am hopeful that all concerned will give that document the consideration which it is due. I wish to congratulate the National Petroleum Council, especially the members of the Committee onNational Oil Policy, and the drafting sub-committee. I note with pride that several of my fellow Oklahomans played prominent roles in this endeavor.

Now, I am not here to give youadvice on federal policies, international oil operations, or "action programs for

this organization.

I am reminded of a description that a school boy once wrote when he was asked to tell who Socrates was, and this young fellow wrote "Socrates was a wise man who went around giving people good advice." Then he concluded by saying that they poisoned him.

The petroleum industry is too big, and much too important to the security and welfare of our country, for thoughtless experimentation or careless meddling. This industry is affected, directly and immediately, by shifting powers and policies the world over, by the peace keeping efforts of our country which may at any time result in armed conflict, as is happening now in Southeast Asia. The industry also feels the effect of political and economic events both here and throughout the world.

Those of us who served in World War II know first hand, of course, the vital role that petroleum places in mechanized warfare. The figures, I believe, show that over 60 percent of all tonnage shipped to the battle areas during World War II were petroleum products. And I understand that in the present Viet Nam crisis, that the same rough figures pertain, it seems about 55 percent of all tonnages going over there are petroleum products. And that proves conclusively that the event of world peace is heavily dependent upon a continuous and adequate supply

of petroleum products.

The members of this Council, the Compacting states, and our federal officials all recognize the necessity in today's troubled world of maintaining adequate domestic petroleum supplies within our geogzaphic control. As the NPC policy statement put it, and I quote: "A healthy and expanding domestic petroleum industry continues to be essential to the security of the United States and to the defense of the Free World."

This appears to be a growing concern of our federal government. Any doubts regarding apprehension felt by federal authorities were clearly dispelled by Secretary Udall in the speech he made to this Council on March 1 of this year. Pointing to a massive task facing this industry, that of finding and developing 83 billion barrels of new petroleum liquids and 450 trillion cubic feet of natural gas to maintain present reserve-production ratios through 1980, Secretary Udall announced a survey by the Department of Interior directed at isolating and developing possible solutions to problems involved in meeting these tremendous future petroleum requirements.

At this time, I formally offer the assistance of the Interstate Oil Compact Commission, and its staff, to the National Petroleum Council in the development of sound and workable policies which will stimulate needed domestic oil and gas exploration and development.

Regulatory and conservation efforts of the producing

states and programs of the federal government, are frequently complimentary. One of the best examples of this is the bolstering which is provided to our state-administered conservation programs by the Mandatory Oil Import Program. In the postwar years prior to the implementation of this program in 1959, state production controls for conservation purposes were practices in guess-work, because of constant uncertainty as to oil import levels. Following the war, imports increased constantly and rapidly year after year. The result was continuous frustration of the efforts of state conservation officials to establish production allowables, because imports always were the unknown quantity.

Therefore, state regulatory agencies found themselves in a position of adjusting state production levels to correct constant oversupply situations, with imports subsequently increasing to take up more slack than was removed. Now, under the import program , state officials have reliable guidelines for administration of conservation programs with assurance as to import levels. There remains within the industry, and among government officials, differences of opinion as to where import levels should be, but there can be no argument with the fact that some stability of imports has been brought about and has resulted in great improvement over conditions which confronted the states and the industry prior to import controls.

A Resolution adopted by the Interstate Oil Compact

Commission at its mid-year meeting in Tulsa is pertinent to this subject. I would like to read the resolved section:

"Therefore, be it resolved by the Interstate Oil Compact Commission in meeting duly assembled on June 22, 1966, in Tulsa, Oklahoma, that the interests of conservation and national security require that the Mandatory Oil Import Program provide the long-range assurance of stability that will result in adequate incentives for the discovery and development of United States petroleum resources needed for the expansion of the Nation's peacetime economy and the security of the Free World.

"Be it further resolved that these same objectives also require:

(1) That no actions be taken that would weaken, undermine or circumvent the Mandatory Oil Import Program.

(2) That national policy as to the importation of natural gas be made consistent with the policy of limiting imports of crude oil and its products.

(3) That appropriate legislation be enacted by Congress so that the production and gathering of natural gas be only under the jurisdiction of state regulatory agencies, and that the price of this mineral resource reflect its market value in open competition with other fuels."

Now, that is the end of the Resolution.

Explicit in the concern of government, both federal and state, as to development of adequate petroleum supplies for the future, is the need to provide the economic climate and the atmosphere which will bring forth the investments and the exploration and drilling adequate to the task. Continuing decline in exploration, and wildcat drilling, is a real and proper concern of government. It is a trend which, at some point and by some means, must be halted and reversed.

While you are all fully aware of the decline in well completions and in drilling activity, I believe the situation to be of such a serious nature as to justify citing comparisons for the past ten years: And I have before me a chart showing the oil complex for the last 10 years as well as the number of active rotary rigs. I am not going to read all of the figures, but I would like to point out that back in 1956, there were 58,160 wells completed in the United States and that ten years later in 1965, there were 41,423. This is a decline of some 17,000 wells in ten years during which period the use of petroleum products in this country went up about 3 percent per year.

To bring this down closer to home, we know that every time a rig is running in a community in Oklahoma, that it is pumping like five to six hundred dollars a day or perhaps much more into the local economy. Back in 1956, this was 8,056 rigs running in Oklahoma or wells completed in Oklahoma, and in 1965, ten years later, we were down to 4,490.

You can imagine the adverse effect that this declining activity has had on our State's economy.

Another figure is the figures of rotary rigs. Back in 1956, on January 1st, there were 2,884 active rotary rigs in the United States. And now on January 1 of 1966, ten years later, we are down to just about 50 percent, a figure being 1,527. Again the figures for Oklahoma show that in 1956, on January 1st, we had 307 rigs running. And ten years later, on January 1, 1966, we had only 179.

So this shows that our expiration activity is down drastically. And again I would like to say that we must somehow figure out a way to stop this trend and reverse it or we are going to find ourselves in serious problems.

There has been a corresponding decline in the number of geologists, petroleum engineers and other petroleum related graduates from our colleges and universities during recent years. Oklahoma drilling contractors report serious and chronic shortages of skilled and experienced drilling crews. And you can easily understand this. A man who expects to support his family and make his living by working as a member of an oil well drilling crew who finds the rigs shut down a large part of the time and he can't make wages, is certainly not going to stay with the industry very long. And as a result, we have a large number of these men who are skilled and experienced in the drilling move out of it into defense work and other activities

and now it is difficult to get some men needed to make up these crews.

Formerly in our State, we had a large number of very small unemployed farm operators and these people were quite willing to work in the drilling business when they were needed. Our farming has become larger and larger until now we just don't have this surplus of labor in the rural community where, of course, most of the oil production is carried on. And as a result, we are seeing a real vacuum of personnel developing in the petroleum industry, which is going to take years to overcome.

Our State governments are mindful of this disturbing trend, and are constantly seeking ways and means of improving exploration incentives. With the support of both major companies and independents, the Railroad Commission of Texas, on June 26, extended oil discovery allowable bonuses to 10 wells in new onshore fields, instead of five wells. This action followed the Commission's extension of discovery allowables from 18 to 24 months. This action was taken earlier this year.

In Louisiana, a member of the State Mineral Board, who serves also in the State Senate, has introduced legislation, with substantial backing, to provide a discovery allowable for the first time in that state. In the State of Oklahoma, the Corporation Commission, effective June 1, implemented a 20 percent across-the-board increase in the discovery allowable which it initiated in 1961. This action had the general support of

independent producers and crude oil purchasers.

As we anticipate vastly increased petroleum requirements for the future, the federal government, state governments, and the industry must give this challenge constant attention. We must look toward developing and applying feasible and effective incentives for accelerated domestic exploration and development.

The fact is that if foreign sources of supply were suddenly cut off, it would seriously tax our domestic oil industry to meet our present peacetime consumption, to say nothing of the additional demands which our country might face in time of emergency. A recent state-by-state survey conducted by the Interstate Oil Compact Commission has shown a shut-in capacity of 2,840,000 barrels per day. This is roughly equivalent to the amount of oil which is presently being imported.

I am pleased to see the National Petroleum Council is also making an estimate of producing capacities. I note you have come to somewhat a different conclusion, but apparently you are using a little different criteria than was used by the IOCC in making their findings.

Since World War II, domestic consumptionhas gone up about 3 percent per year. Our proven petroleum reserves have increased by only 1 percent per year, so that our demand has rapidly been catching up with producing capacity. Within a very short time, we will be consuming more petroleum products in

this country than our oil and gas fields would be able to supply if imports were cut off. The impact of such a situation on our nation's international peace keeping posture cannot be fully anticipated, but it obviously will not strengthen our position.

There is another feature too that I believe is worthy of mention and that is that it is certain when our nation becomes really dependent upon petroleum from other countries and other sources, and particularly in the event of some national emergency, we will discover the difficulty of bargaining from a position of weakness. We may even discover that the profit making motive is not exclusively an American economic institution.

This business of economics in national defense, of course, is a very tricky one. I would not like to be in a position of having to make some of these decisions that our defense people have to make, but I would like to call your attention -- you have these two matters, this matter of economics and defense sometimes get complicated; I would like to read for you a more or less facetious, although not entirely facetious, statement that appeared in the Congressional Record on July 12.

Let me read this in its entirety. This is a news release from the Office of the Assistant Secretary of Defense, which was issued onJuly 1, 1871, not quite a hundred years ago. And here is the headline: "Large Savings Achieved by Field Commander in the West."

"Defense officials have lauded General George Custer,

Commander of the Seventh Calvary, for his decision to save money by not taking the new Gatling gun into the field during the annual campaign in Dakota Territory against the Blackfoot and the Sioux. Custer's decisions is expected to save 760 dollars in feed for horses to pull the Gatling guns as well as $48.50 in the additional maintenance of the new delicate weapons exposed to dust in field condition."

We hope we don't become quite so economy minded in our present situation.

The point that I want most to leave with the members of this Council is the need for creating a climate favorable for the discovery and development of new supplies and reserves within the United States.

The fact simply stated is that if our nation is to continue to deal with world problems from a position of strength, we must continue to have adequate domestically situated petroleum supplies.

In addition to its effect on our international posture, the activity of the petroleum industry has a distinct influence on the economic health of every oil producing state, as I already mentioned. Business on every mainstreet in Oklahoma, as in other states fortunate enough to have petroleum reserves, is affected by the level of petroleum industry activity. It naturally follows that the condition of each oil State Treasury is acutely

sensitive to the pulse of the petroleum industry. Therefore, state governments are directly and vitally concerned that the domestic petroleum industry be encouraged to prosper and grow.

I am not advocating that American companies pull out of foreign commitments, and come home completely. Our country is fortunate that we have developed here the techniques, the foresight, the management abilities to help find and develop the world's vast petroleum deposits. This contributed to the unprecedented economic development of the Free World.

What I am advocating is that increased emphasis be placed on discovery and development of new supplies of petroleum in our own country. This can certainly be done without upsetting our foreign relationships, or jeopardizing foreign commitments.

A member of this Council, Mr. Robert O. Anderson, Chairman and Chief Executive Officer of Atlantic Richfield Company, recently made a statement which illustrates the kind of attitude I am talking about. Mr. Anderson said, "After careful analysis of the risks and rewards in the search for foreign crude, we are looking again to North America with more interest and keenness than we have for over a decade."

He went on to say, "We believe the transition home from abroad is a certainty," and although he emphasized prospects in Canada, in the outer continental shelf, and in Alaska, there is considerable basis for confidence for new discoveries in the remaining sedimentary prospects throughout our country. The

United States Geological Survey has pointed out, for example, that only one seventh of the sedimentary rock, favorable to the accumulation of oil and gas, has thus far been thoroughly explored.

We in Oklahoma have great confidence in the future, we welcome and encourage exploration there, and we are attempting to improve the economic attraction of oil and gas exploration in our state and as I mentioned, many other states are doing the same.

In the final analysis the maintenance of petroleum reserves essential to our security must come from our system of free enterprise. It cannot successfully be done by the federal government, and it cannot be done by the states. It can be done and must be accomplished by companies such as are represented in this room; companies with the exploratory experience, the scientific and technological knowledge and the human resources, and the economic strength, buttressed with a faith that we can and must develop the energy resources which we know are here.

The petroleum industry faces the awesome task of providing this nation with adequate petroleum energy supplies in the years ahead. We have geological resource base. We have the human resources. The industry possesses the technological abilities. Government at both state and federal levels has the responsibility and the capability of creating the climate to make the development possible.

Our goal is to provide the energy resources to assure the continued security and the future economic health of the greatest nation on earth and of the Free World. That is motivation enough to accomplish any task.

Again, I thank you for the opportunity and the privilege of appearing here before this important group representing one of the greatest of our American industries.

CHAIRMAN HAMON: Thank you, very much, Governor Sellmon, for that splendid address.

I next plan to call on Mr. Roland Rodman. This will surprise you; many of you think of Mr. Rodman as an Okie, but originally he was from Nebraska and as our custom of having somebody from the native state introduce our speaker, I am going to have an old Nebraskan, Roland Rodman, introduce the next speaker.

MR. RODMAN: Gentlemen, as a former Nebraskan, it is my privilege to present to you today, one of the most distinguished citizens of Nebraska, who now serves the Federal Government as Chairman of the Federal Power Commission.

Mr. Lee C. White was born in Omaha, Nebraska, which is a suburb of Blair, which is my point of birth. He was educated in the public schools in Omaha; he comes to the Federal Power Commission eminently qualified for the job and the responsibility that he assumes. He holds both an engineering degree and a law degree from the University of Nebraska. He

served his nation in the Armed Forces for a period of three years. Following graduate from the University he was with the Tennessee Valley Authority on their legal staff for several years. He has served both the Kennedy and the Johnson Administrations in various capacities, and is thoroughly familiar with the in's and out's and the workings of the Federal Government.

And lastly, may I say to you, that according to the script, Mr. White has five White children.

(Laughter)

MR. WHITE: Thank you, Mr. Rodman, Members of the Council, and distinguished guests.

One thing I am sure all of you have learned to do now is to take somewhat cautiously the comments and remarks of Nebraskans. Mr. Rodman is no exception to that rule.

(Laughter)

With my children, there are five in number, their name and color sometimes match, sometimes don't.

(Laughter)

I had asked one of the bright young speech writers at the Federal Power Commission staff to prepare some remarks for me. I didn't have much time to go over them and while reading them in the car coming to this meeting, I was a little startled to see that he had me saying that we ought to support legislation ~~nationalizing~~ nationalizing and socializing the natural gas industry this year and the oil industry next year.

(Laughter)

It occurs to me before I commit myself to such a course that I ought to discuss it for an hour or so at least with my colleagues and if you will permit me ~~there, I think~~ to do so I will abandon the prepared text and speak informally.

Though I am somewhat familiar, as Mr. Rodman suggests, with some of the workings of the Federal Government, in all candor, the gas side of the Federal Power Commission's responsibilities ~~are~~ is comparatively new to me. I am in a learning process and I think a very good set of teachers are with me all of the time. Especially, therefore, we welcome the opportunity to meet with the people of the industry and I see absolutely no problem in doing so.

We have already had the opportunity to meet with a number of ~~I think~~ very impressive spokesmen of all of the segments of the natural gas industry. I don't know, I can't say for sure, but I have the impression on the basis of what has been said by my colleagues and what I have heard by other leaders and, of course, Mr. ~~Boyce Lee~~ Reis Tele's ~~phonetic sound~~ speech last night at the banquet, ~~the bits and pieces,~~ that there seems to be ~~at least~~ a desire on the part of both the industry and the Federal Power Commission to reach a little better stage of communication, a little better means of exchanging thoughts and ~~I guess~~ above all, information.

Certainly to the extent that I can do anything about

it, I would want to encourage and to promote such a means of communication and hopefully of cooperation.

I don't think that the Federal Power Commission or any other regulatory body exists independently from the industry. Governor Bellmon has spoken about the need to have governmental policy keyed to encouraging the growth and development of industry in this country and certainly that applies to the ~~natural~~ very important natural gas industry. No self-respecting regulatory could take any different view. No self-respecting regulatory wants the industry to be worse off when he leaves office than when he came. This is ~~actually~~ a ~~matter~~ ~~we can~~ starting point. From there and we will certainly find differences of opinion as to how to ~~get to~~ achieve that goal, but as to ~~where we~~ what the goal should ~~be~~ be, I think there can be and is very little difference.

The statistics that come to our attention indicate that natural gas industry is indeed in a very healthy state at the moment. ~~I notice that~~ Some of you may have noted that the Wall Street Journal suggests in an article this morning that some of the industry is finding it possible to diversify. I don't know that the Federal Power Commission, as the article seems to imply, is entitled to all or indeed any of the credit for this diversification. I would assume that it probably rests upon the sound business judgment of those of you who make the decisions in your own organizations.

The whole concept of industry advisory committees

is one which I have had some dealings with before I came to the Federal Power Commission, and I think there can be no question about their usefulness and their value. Very elaborate rules have been developed within the executive branch of the Federal Government to insure that the public is kept aware of what is going on. I don't think it is because the public doesn't trust industry and Government when they get together, but rather that the public's business indeed must be available and known to the public.

But we at the Federal Power Commission have, I think, developed ~~worked up~~ some exceptionally ~~exceptional~~ good relationships with both the gas industry and the power industry. I believe our work has to be better as a result of it. I hope that your own effort is better as a result of it. We naturally are very mindful of the lines of propriety. We do not and are not able to discuss pending cases, but there are, of course, a general consideration or general factors in the industry that regulators must take into account and one of the most effective and appropriate places to get that information, get that feel for what is going on, is from those of you who are deep into it and have been for years and who understand and make the policy decisions that influence the course that the industry takes.

The Commission, as most of you know, is already deeply embarked on the area ~~rigged~~ wide pricing technique, as exemplified in the ~~Permian~~ Permian Basin decisions pending before the Supreme Court. I did not

participate in that decision, ~~I have not~~ nor have I had an opportunity to participate in ~~any of the following decisions~~ setting up the other area rate proceedings that are in the pipeline and should be reaching the Commission soon. But certainly, the concept evolved in the Commission under the Chairmanship of Mr. ~~Ikdall~~ KuyKendall, and implemented ~~within~~ by the Commission under the Chairmanship of Mr. Swidler, strikes me as appropriate and effective means of handling a very difficult regulatory assignment.

We are, Governor, very mindful of the need to take into account what inducement, what incentives, will be available to encourage men to invest money. These are hardheaded business decisions. We assume that people will make them on the basis of expectations of making a profit. And we hope that every decision that is made in the setting of rates, will lead toward that end and at the same time be consistent and harmonious with the interests of those who are the customers of the producers.

We are also at the Commission extremely mindful of the need to move decisions and cases and applications through the Commission process. Recently, there has been a tendency to have competitive or comparative proposals submitted to serve the same ~~identical~~ or, virtually identical market. This has created a problem with procedure, which we hope to ~~be able to~~ tackle and to make some progress with.

It presents in a sense the classic dilemma: the

one horn is the desire to move through expeditiously so that the decisions will not be stale and the facts that are acted upon will not be old and obsolete, and on the other hand, or the other horn of the dilemma is the need to make sure that all of the parties who have a legitimate interest in it, are entitled and permitted to make their cases and that the Commission has before it all of the possible proposals so that it may select that which is best suited to the particular factual situation.

How to reconcile those two almost conflicting factors is the task that we have asked some of our people to focus upon. We sought such assistance as the Bar Association, the Federal Power Bar Association, can give to us. As a lawyer myself, I can recognize how lawyers might just have a little tendency to make sure they don't kill any golden geese and I would hope, therefore, that those of you who are in the management end of it, will keep your eye on your lawyers and make sure that they are giving us and that you give to us, your specific suggestions and recommendations as to how our procedures can be improved.

I know that a few years ago, a very good industry group made some specific proposals to the Federal Power Commission and that a great number of them are in effect today. They were adopted and I think to the benefit of all concerned.

The question of a study of reserves is obviously a continuing one. It has interest to all of you gentlemen, it has

interest to every group in the Federal Government that has some involvement in the minerals and petroleum area, certainly it has a considerable interest to the Power Commission.

We have before us continuously ~~certain indicating~~ cases involving implications ~~which~~ resting in large measure on some prediction, some projection, some estimate, of what reserves are and will be. Naturally, we use and must use the best data and the most current data, the most reliable data that is available at the time the decision is reached.

But realistically, ~~the wide range of~~ making accurate predictions is admittedly an in exact science which calls for a concerted effort on the part of all ~~of these~~ interested groups to reach some accord, if at all possible, as to the standards that will be employed in the techniques for measurement and for prediction. The Department of the Interior has been assigned by the Budget Bureau, the responsibility within the Federal Government ~~to~~ of standardizing statistic techniques. The Federal Power Commission is delighted and pleased to cooperate and I believe that there has been a high degree of cooperation.

Similarly, the Federal Power Commission is cooperating with the study undertaken now by the Department of the Interior to look into the question of all petroleum reserves, including natural gas supplies. This makes all the sense in the world to us to cooperate with the Department of the Interior and the remainder of the Executive Branch of the Government to

the end that we come up with the best information that is attainable.

We have rather recently at the Commission, found ourselves in somewhat of a bit of disagreement about the degree of second guessing of management. We have recently within the last week, released a decision involving the handling of liberalized depreciation. It would be perhaps unfair for me to talk about that particular element of management and as a consequence, I have another one that I would like to talk about, one where the Commission finds itself in total agreement. We only offer it for whatever guidance any of you care to find in it.

For your information, we have advised all of the people at the staff, particularly the lawyers, of the Federal Power Commission, that when they are at lunch, and when they are drinking martinis, that they make sure those martinis are made of gin, not vodka.

(Laughter)

We are very anxious to have everybody know that our people are drunk, not stupid.

(Laughter)

The reaction suggests to me that there will be very little impact in the industry as a result of that pronouncement.

(Laughter)

I am very pleased at the opportunity to get to meet

you people individually. There is, of course, a much larger number of you than there are of us, and sometimes we are not as able to respond as promptly and at the length we would like to. But I can say to you ~~though~~, that ~~I~~, those people from the industry who have made their way to my office, have been most welcome and I am really quite grateful ~~for~~ for the opportunity to chat and to understand, to the extent that it is possible, the views ~~of~~ of you ~~people in the~~ industry leaders ~~have~~.

I think I am about to repeat myself. When that happens, it is time to stop. ~~I therefore conclude, and~~ I shall do so and I thank you very much.

(Applause)

CHAIRMAN HAMON: Thank you, very much for that fine, clarifying talk. I am coming around to see you for suggestions and I am sure all of the other members of the Council will help you out in running the Department.

I am next going to call on Mr. Barney Majewski, who is from Illinois, to introduce the next speaker, who happens also to be from Illinois.

Barney.

MR. MAJEWSKI: Mr. Chairman, before ~~in~~ I introduce the next speaker, I put my teeth in my mouth so I won't whistle at you. That is a hell of a mess, I know.

(Laughter)

I want to tell you that I have enjoyed being with

the Council since its foundation. I was one of the founders of it. I helped Howard formalize the footwork, and you were a member of that committee, and I think just two of us are still active.

And in order to remain active, I am going to tender regretfully to you my resignation at the end of this term. I honor my association and love it, I never saw a grander bunch of guys than the oil fellows are, and I now include the gas fellows after I have heard the Federal Power Commission Chairman.

(Laughter)

I think they are all right, too.

(Laughter)

I will formally write you a letter, Jake, but if you are not going to be the next chairman, I won't send it to you, because I promised I wouldn't resign from the council in your administration.

My function here is to introduce Dr. Myron R. Blee. Is it Blee?

DR. BLEE: Yes.

MR. MAJEWSKI: You know, I followed Nellie Bly and I try to get "Bly" into there, but I couldn't work it in. I am of that vintage, you see. As Deputy Director of the Office of Emergency Planning and the Executive Office of the President, assists the Director in the administration of nonmilitary defense programs for the government and mobilization of Federal assistance to the States, where they are stricken by major disasters.

President Johnson nominated Dr. Blee to this post on June 6, 1966. He is a newcomer. He was confirmed by the Senate on June 24 of this year and was sworn in on July 4, 1966. He served previously as Special Assistant to the Director of OEP, Ferris Brown. Dr. Blee is on leave of absence as President Elect of the Junior College of Broward County, Fort Lauderdale, Florida.

Before he became President of Broward County Junior College, Dr. Blee served as Associate Dean of Academic Affairs of the Florida Atlantic University at Boca Raton, Florida. He lives in an excellent town.

(Laughter)

He had previously directed the Florida Institute for Continuing University Studies. As a member of Florida's Educational Television Commission, he pioneered the promotion of educational television in the State. Dr. Blee also has served on the Board of Control of Federal Institutions of Higher Learning.

From 1954 through 1966, Dr. Blee was Associate Director of the Council for the Study of Higher Education in Florida, and for three years he was Associate Director of the Florida Legislative Reference Bureau.

A Lieutenant Commander in the Naval Reserves, Dr. Blee was officer in charge of the Barbers Point training facility at Pearl Harbor during World War II.

After he became Associate Dean of Men at Normal Illinois University at De Kalb, Illinois. Dr. Blee holds degrees as Master of Arts and Doctor of Education from the University of Illinois.

He was born in Pawpaw, Illinois, on February 25, 1917. Dr. Blee is married to the former Charlotte Marie Lehrins. Mrs. Blee was president of the Florida Congress of Parents and Teachers from 1962 to 1964, and now chairs the Committee on Legislation of the National Congress of Parents and Teachers.

Dr. Blee and his wife have one daughter, Kathleen, a student in Agness Scott College in Georgia. The family lives in Washington, D. C.

It gives me great pleasure and honor to introduce Dr. Blee.

(Applause)

DR. BLEE: Thank you, sir. I choose to move to this side. While I do have my teeth all properly in place, sir, I have trouble. This podium is better adjusted to my spectacles. That is, I would like to have you believe that I am becoming accustomed to bifocals. The truth of the matter is I am trying to avoid trifocals.

Mr. Secretary Moore, Governor Bellmon, Mr. White, we envy you, those of us whohave been associated with the State Capitol in Florida, Governor Bryant and I, we envy a governor whose capitol can produce cash as well as consume it.

(Laughter)

I was reminded last night as I heard one of the slips in introductions yesterday, and Secretary Hull reappeared momentarily, of a situation which happened during one of the emergencies of the Nation's, which had particular bearing on Florida. At the time of the Cuban invasion and after the presidential appearance on television, Governor Bryant decided that this would be a good time to give further assurance to those Americans in close position in relation to that possible confrontation, of the security and the emergency plans which were ready.

So he assembled with him the Adjutant General, the Director of Civil Defense, who happened to be a Colonel Hiram W. Tarkington, and several other people, and in the course of the introductions, each one giving some reason for a little more confidence in the emergency planning, he came at last to Colonel Tarkington and he said, "In times of great trouble, we have found we can always depend upon Hiram Walker."

(Laughter)

This brought a greater outpouring of stockpiling than anything which had been known in Florida for a long time.

I knew all of this wasn't necessary, but among other things, I wanted to check the public address system to be sure that from here you can hear me in the back and this despite all of this demonstration that I should know coming from Education,

Hon. Farris Bryant
Director, O & P
(former Governor of Fla.
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all about the gas business, I wanted to be sure that you could hear. Because at one time, about two-thirds of the way through what I thought was a perfectly brilliant address, the man seated way back there, where you are, stood up and said, "I haven't heard a word you have said." And a very kind gentleman seated in the position where Mr. Mickerson is this morning, in a very kindly fashion stood up and said, "I have heard every word he said and you may have my seat."

(Laughter)

It is a great pleasure to us to take a little part in your 20th anniversary celebration. During World War II as a part of our naval experience, the Governor (Bryant?) and I were stationed for a time at Galveston, Texas, concerned with the movement of petroleum products from that gulf port and the others adjacent to it. So we believe that we would like to think that while we are entirely newcomers to the Washington scene, that somehow this represents for us a reunion with people with whom we had joined hands previously.

The Council is of particular interest to us because it demonstrates the close industry-government cooperation which exists and which must exist if mobilization effort and planning is to be successful.

It is perfectly clear to all concerned that the Government is not in the petroleum business. But it is equally clear that we must rely on your industry to satisfy essential

and critical requirements in any emergency. The Government can set goals, national goals, tell you what in our judgment is best for the nation as a whole, but the doing and the delivering is up to you.

It would be presumptuous and I think somewhat unnecessary for me to tell you how important petroleum is. Perhaps the recent, successful effort to interdict petroleum supplies in North Vietnam is the best current example of its importance.

It was two years ago, I am told, that the National Petroleum Council became the first group to hear a public discussion of an Office of Defense Resources, ODR, a standby unit which could be ordered into being only at the direction of the President. I can now report that this concept has advanced to the point where an organizational structure has been laid out. This new agency, when and if activated, would absorb all the functions of the Office of Emergency Planning. It would then serve as a nerve center for the President in the entire mobilization field. As such, it is conceived to call upon and, in fact, depend upon all agencies which currently carry mobilization responsibilities. In other words, it would be a clearing house and a criteria-setter for the Federal establishment, while actual operations would still, for the most part, reside with the other agencies.

The Director of the ODR would delegate emergency

authority to appropriate Federal departments and agencies. For petroleum and gas, the responsibility would fall to the Office of Oil and Gas in the Department of the Interior or the Emergency Petroleum and Gas Administration, if established. This would permit the petroleum and gas agency to administer the measures for the production and distribution of these fuels to meet essential civilian and military needs.

The Director of the ODR would also chair the Resource Advisory Board, a Board established by the President and composed of the heads of all appropriate Federal departments and agencies including, of course, the Secretary of the Interior. This Board would formulate basic resource policy and advise the Director of ODR on the total mobilization effort.

Business, labor and industry would play a vital -- in fact indispensable -- role in this process. Key industry representatives, now serving as Executive Reservists, would assume principal positions, for which they are trained and knowledgeable, in many Government offices.

I should stress that traditional agency responsibilities and their close liaison with the President would not be impaired or reduced by this arrangement. Only in the case of mobilization responsibilities would their relationships be subject to ODR direction and review.

At the outset, ODR was conceived to provide a mechanism for use in nuclear war. Today, the concept has been

extended and redesigned for use in a limited war. Nevertheless, it remains solely with the President to activate ODR.

There are all kinds of limited wars. To be sure, what was once considered full-scale conventional war is, by today's definition, a limited war. There is no precise trigger point beyond which the ODR would be required. Certainly, this is not now the case.

Our present and anticipated commitments in Vietnam do not now justify a decision to put ODR into force. Aothough fighting has intensified, our economy has been able to support our requirements without serious strain.

Only two weeks ago, Secretary of Defense McNamara reported to President Johnson that our production of ammunition and air ordnance now exceeds consumption and that ample stocks of these items are on hand. He even suggested it may prove desirable to reduce production substantially.

As President Johnson indicated, this does not mean we will not need additional men, planes, helicopters, or other end-items. We will. Nor does it mean that problems do not occur. Indeed, they do.

The President continues to seek the voluntary cooperation of industry, State and local governments, and other segments of our society to keep inflationary forces in check. At present, the national economic picture is mixed. Some signs of a slowdown have appeared. The pressures for potentially

overheating the economy seem to have subsided. Overall, I would say that the prospect for continued balanced growth and full employment is very good.

As you know, our agency maintains, by Presidential Proclamation, a constant surveillance of imports of petroleum and its primary derivatives in respect of the national security, including specific reference to prices. We determine whether any price increases are necessary to accomplish national security objectives. Consultation within the Executive Branch is involved in this evaluation.

Additionally, an OEP surveillance committee advises the Director of OEP on the impact of the Vietnam war upon essential resources. This committee regularly looks for possible bottlenecks and recommends whatever actions may be needed.

Of current concern are the difficulties of the Department of Defense in satisfying its requirements for jet fuel JP-4. We will continue to work closely with the Department of the Interior to assure a satisfactory supply of petroleum for defense needs at prices and under circumstances which do not add to inflationary pressures. Not too long ago, many in the petroleum industry cited a slackening of domestic demand as a major blight upon the industry. The trend is now reversed. Domestic demand is at peak levels. This is a good time to exercise restraint and maintain prices at reasonable levels.

Of course, petroleum is only one resource, albeit a

critical one. We have also encountered many specific problems in other fields. A priority system authorized by the Defense Production Act and administered by the Department of Commerce has been in effect for some time. This system now covers the critical metals -- steel, copper, aluminum and nickel alloy. It is particularly useful in assuring that critical defense and defense-related needs are met. Requirements are submitted to the Director of OEP for approval. Business and Defense Services Administration then provides the appropriate set-aside at the mills to meet the approved program levels. About a year ago, those set aside were in the neighborhood of 4 percent of production, and now exceed 10 percent. This system could, if necessary, be extended to any materials or resources in short supply.

As to other mobilization machinery, let me make one point clear. We, in OEP, still live by the dictum that controls--either industry-wide or consumer--as well as other restrictions are to be invoked only when and if conditions allow no other recourse. This principle governs all mobilization planning.

But we do not deny or discount the possibility that such mechanisms could conceivably be needed. For example, OEP is now moving forward on a plan for a standby economic stabilization agency. Such authorities as needed for price, wage and rent controls are not now on the statute books, although standby documents are kept current.

Our need to have an economic stabilization agency is

the same as our need to have a fallout shelter program. We do not, of course, expect ever to use our fallout shelters, but we recognize the wisdom of making plans to do so. It is the same with economic stabilization. However, direct controls would come only if absolutely necessary and only when voluntary measures have failed.

We are now working with Federal agencies on standby Emergency Action Documents which describe measures that might be required in a limited war.

We would hope that you in the industry and the Council would give us the same insights and assistance in our new limited war planning as you have given in your previous studies on nuclear war. Your 1964 report "Petroleum and Gas in a National Emergency" was a model of how industry and Government can work together for mutual benefits. You helped to identify many trouble spots and, even shortcomings, of our previous planning.

Foremost among these was the problem you identified in the field of emergency communications. Such communications are vital against a backdrop of catastrophic damage to the United States which could sharply intensify our reliance on all surviving petroleum resources not only within but also outside the United States.

Communications are essential within the United States to enable large concentrations of available supply to be sent to

areas of greatest need. The industry must also be able to communicate with its vast resources in tankers on the ocean and in foreign areas. These far-flung assets throughout the world could be critical where our mainland supplies are denied or destroyed.

Your constant stress of this problem led to a report by the National Industry Advisory Committee to the Federal Communications Commission. Known by the short title, PAGICEP, which stands for "Petroleum and Gas Industry Communications Emergency Plan," it was the first time the vast and critical nature of petroleum industry communication on a worldwide basis was fully treated. OEP has approved this interim plan to provide the needed communication capability to the industry. I am certain you people played a significant role in this happy outcome.

Now, the next step is for the industry to identify locations and requirements for communications that will be needed so your requirements will be met. And I assure you that we stand ready to satisfy your needs when identified.

I feel certain we can overcome the effects of any emergency by proper and judicious use of our resources. We are especially proud of and pleased with the contributions and accomplishments of the petroleum industry in this complex and difficult task. You have not only served as a catalyst and conscience for actions of your government, you have also blazed

trails in your own planning.

Particularly impressive are your own measures to assure continuity of operations and management in an emergency. Such efforts stand out as an example for other industries and should be a source of pride for the petroleum industry. I am told of one petroleum company which has provided alternate headquarters for key personnel and has also made provision for their families.

I applaud your initiative and your leadership. You have helped us immeasurably in our planning.

I am aware of the work which you, together with the Office of Oil and Gas and members of our staff, are now doing on EPGA operating manuals. This teamwork -- government and industry -- is mutually advantageous. It assures industry plans that dovetail with government plans.

We will all continue to work with the Council and with Admiral Lattu and the Office of Oil and Gas, and we hope the name of Lafferty and Lezner and ~~Prchoff~~ Primoff on our staff will become a part of the stock-in-trade for solution of these problems. It is only by working together that we can preserve our free competitive society no matter what emergency we face.

By nature, by practice and by experience, I can be labeled a free enterpriser -- one who believes deeply that system has made us strong, can keep us sturdy and, would provide the stamina to carry us through any crisis that may lie ahead.

Your industry is in the vanguard of those who give sustenance to that faith.

Thank you, very much.

(Applause)

CHAIRMAN HAMON: Thank you, Dr. Blee, for those splendid remarks.

I am going to vary the agenda somewhat and call on John Kelly to make his report on the Committee on Participation in the Water for Peace Program.

MR. KELLY: Thank you, Mr. Chairman, and I would like to tell the group why. The only airplane reservation I could get out today was on an extra plane that is leaving at 12:30. So I thank you very much. And I wanted to stay especially to hear Howard Rambin's report on Productive Capacity.

Howard, I am going to talk about man's water problem. Perhaps as they say, you can pour a little oil on these troubled waters without, of course, polluting them.

(Laughter)

The Committee on Participation in the Water for Peace Program, report of the Chairman. On March 1, 1966, the National Petroleum Council agreed to make the study suggested on February 1, 1966, by the Honorable J. Cordell Moore, Assistant Secretary of the Interior for Mineral Resources, in a letter to Mr. Jake L. Hamon, Chairman of the Council.

The Department's request had noted the call by

President Johnson for a massive cooperative international effort to find solutions for man's water problems. Success in this effort, the request said, obviously requires that we invoke the contribution which can be made by all available groups. Included was a call for such assistance as might be provided by private industry in collaboration with Government and because of its extensive worldwide search for resources, the petroleum industry was felt especially knowledgeable with respect to availabilities of water in remote or undeveloped areas.

The assistance of the National Petroleum Council, therefore, was requested by the Department of the Interior in formulating the role which should be given to the petroleum industry in the Water for Peace Program as well as how this role might be practically applied. Results were requested by July 1, 1966.

A 9-man committee was appointed by Chairman Hamon to make this study. Assistant Secretary Moore served as Co-Chairman of this committee.

The officers of the committee conferred with the officials of the Department of the Interior with respect to the nature of the Water for Peace Program and what specifically they hoped to obtain from this Council study. With that additional background, each member of the committee was contacted and asked to respond to a short series of questions. It was felt that the replies would enable the committee to make a broad assessment

of the manner in which the petroleum industry might participate, at least in a general way, in the Water for Peace Program.

We have submitted a summary report on the subject and at the same time have turned over the industrial replies to the Interior Department officials concerned with the Water for Peace Program. Preliminary findings are based upon detailed replies from nine companies having some sort of operation abroad in a list of 18 countries in the Eastern Hemisphere and 11 in the Western Hemisphere.

In the course of providing water for drilling, producing, refining, and other industrial operations, and for human consumption, certain types of information on water supplies have generally been developed. Availability of such information as location and quality of surface and underground water, treatment necessary to make fit for human or industrial use, experiences with small desalinization plans and water systems and the water supply problems of small communities or rural agricultural areas was indicated.

It was apparent that some company figures may contain useful water information indirectly related to the specific objectives of the Water for Peace Program. In this category would be information relating to surface geologic study, photogeology, seismic exploration, seismic shot hole tests, exploratory drilling for oil and gas, and drilling of water supply wells.

General information and help appeared possible from

such source materials. Some of the companies surveyed indicated that they also have participated either in specific water programs or water-related research projects.

Some petroleum companies have carried out research and development on new techniques for sealing of canals and construction of watersheds and catchments. These techniques can be of considerable importance in water harvesting, particularly for agricultural use. One company has carried out promising research on the asphalt coating of large land areas to generate additional rainfall in rain deficient areas by inducing thermal updrafts. These companies have indicated willingness to work with appropriate agencies in applying this technology or carrying out further research.

Based upon necessarily preliminary findings, the committee concluded that petroleum companies operating overseas, have at least general technical knowledge of the water resource in the countries where they operate. Much of this knowledge already is shared with the governments of the countries concerned. The committee believes that additional knowledge probably can be supplied once the objectives of the Water for Peace Program are more clearly defined.

Most American petroleum companies operating overseas appear willing to assist in the program, furnishing information on specific activities where useful as well as assistance through the counseling of people who deal with the technical agencies

in foreign countries.

Mr. Chairman, I move the adoption of this Committee Report.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the adoption of the Committee Report please signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: The report is adopted.

John, I want to thank you for a very fine report. It was fine, but I liked your speech last night better. Thank you for that, too.

(Laughter)

Several weeks ago, I had a letter from the Secretary of Commerce saying he didn't want me to spend any more money than was necessary. Cordell has just handed me this announcement for release on July 19, on which he says the bid for Louisiana offshore oil and gas leases will be asked on 230 thousand acres of outer Continental Shelf plans off the coast of Louisiana. Sealed bids for oil and gas leases will be received until 9:30 a.m., Central Standard Time, October 18.

So I will have to rewrite the Secretary of Commerce and tell him I made a slight mistake. I am going to have to spend a little more money this year.

The next item on the agenda today, I will ask Admiral

Lattu to introduce the next speaker. I don't know whether the Admiral and the next speaker are from the same state or not, but the Admiral asked me to let him introduce the next speaker.

ADMIRAL LATTU: Mr. Chairman, gentlemen, I had hoped this morning to introduce my good friend, Rear Admiral Winston H. Schleef, but he is unable to be here today.

Since I have been in Washington so long, I think I can pretty near qualify for the distinction of being a native Washingtonian. Your next speaker is a native Washingtonian. Back in 1949, he was hired from RFC, by Admiral Biggs. While over in RFC, he had charge of the entire octane aviation gasoline program during World War II.

He has had 30 years of very loyal and ~~distinct~~ distinguished service in the government. He has been 20 years in the Department of Defense and with the petroleum industry. I have known him for over 10 years and called him constantly during all of these years. He is a very fine gentleman, he is a Statesman, he understands the government-industry relationship and I know that all of you people here know him very well.

So before he comes to the platform, I would also like to announce in September he is retiring. So I know that you join me in wishing him the very, very best and we are sorry to see an able man like this leave the government. So let's give him a big hand. Joe Muir.

(Applause)

MR. MUIR: Mr. Chairman, members of the National Petroleum Council, distinguished guests, I am sure you might want to know why I am pinch hitting up here for Admiral Schleef. I have a medical bulletin here, I won't attempt to read. There are some terms in there that I can't pronounce, much less understand, but I will say that the Admiral is in Bethesda Naval Hospital. He was out there for treatment for bronchitis, and while there, he suffered a slight heart attack.

Undoubtedly, at the present plans he will be out of action for two to three months, and then he hopes to come back and satisfy his medical board as to his condition to come back.

In the interim, in his capacity as Commander of Defense Fuel Supply Center, Colonel Stand, Leon Stand, has been designated Acting Commander of the Defense Fuel Supply Center and I know he is here this morning and I wish he would stand up and be recognized.

(Applause)

As you note on the agenda, that the Admiral has a two-hat capacity, somewhat in the same way General Seaton, his predecessor had. I think there is a slight change in official designation but he still has the two hats. And Colonel Stand will carry on in the Defense Fuel Supply Center activity and I will attempt to carry on as long as I can in the DOD activities.

I would like to at this time inject a personal observation also. In view of the events of the last few months,

I am beginning to wonder if I might not be a bad influence on my bosses. Just prior to General Senter's retirement, he had an extended session in the hospital, and now soon after Admiral Schleef's reporting on board, he is temporarily incapacitated for active duty. I recall the old saying that to solve a problem, you must first remove the cause. This is being worked on and it now appears the cause will be removed within the near future.

Seriously speaking, however, Admiral Schleef has asked that I express his sincere regret for not being able to meet with you today. It was not until last Thursday that he was officially told that he would be unable to attend this meeting. At that time his speech had been prepared, edited, and cleared. So, therefore, I ask that you bear with me and imagine that Admiral Schleef is standing in my place before you, making the following statements:

"Gentlemen: I've been in the petroleum business exactly six weeks to-day. In that time, I've been exposed to any number of plans, proposals, ideas, charts and statistics. The one that I didn't have to be convinced of, was the fact that oil plays a dominant role in the defense posture of this country to recognize the military importance of petroleum, one only has to observe our recent targeting pattern in Vietnam. Even though their weapons system are much less petroleum demanding than ours, I'm sure the North Vietnamese are finding

it more difficult to move over the Ho Chi Minh Trail and to fuel their petroleum consuming equipment.

"The one that has impressed me most in the last six weeks is the availability of industry cooperation and know-how to insure that the military gets the back-up petroleum support it so vitally needs. This Council exemplifies that fact - a fact that is tremendously gratifying and reassuring to me.

"I know my distinguished predecessor, General Oscar Senter, followed the work of the National Petroleum Council very closely as evidenced by his attendance today as an observer, - I do not plan any change in that policy.

"In the short time allotted to me this morning, I would like to talk about our continual balance of payments studies for returning overseas petroleum procurement to the United States and to also bring you up to date on the petroleum situation in Vietnam.

"The return of DOD overseas petroleum procurements to the U. S. is, of course, nothing really new. This program was started several years ago when a limit was set on the level of our overseas purchases. In FY 65, we actually began returning procurements. $27 million was returned in that year; $66 million in FY 66; and $83 million is scheduled for FY 67. Most of these returns were from European and in a few cases from Caribbean sources.

"At the same time, however, in other parts of the

world, such as the Pacific Theatre, our greatly accelerated requirements were more than offsetting these returns. So that in effect, at the end of FY 66, the level of our overseas procurement was higher than it was two years before.

"Because of this, petroleum was one of the balance of payments expenditure items singled out by Mr. McNamara for special treatment in FY 67. We began to explore a number of actions which would, if fully implemented, require the return of all our overseas clean product procurements except a small hard core requirement for into-plane and local deliveries. In term of quantity, this would place an additional demand on domestic refineries of about 270,000 barrels a day.

"This total return approach was not approved because of its high relative additional cost, serious logistical implications and the mooted question relating to adequate domestic capability. Another approach, however, that was pursued was a plan whereby we would continue buying our overseas requirements from the overseas suppliers and in consideration thereof, the suppliers would arrange through their corporate affiliates to have crude imports into the U. S. reduced by a predetermined barrel ratio. This reduction would, of course, improve our international balance of payments relating to petroleum. All I care to say about this plan today is the fact that it was not favorably received by industry.

"We therefore continue to study and analyze other

possible courses of action whereby the pol overseas expenditures can be further reduced. It would be inappropriate for me at this time to specifically comment on the other courses of action now being considered since no final decisions have been made in connection therewith. The fact remains, however, that we will continue to consider the advisability of returning to the U. S. Additional quantities of our overseas requirements to the extent it is practicable and feasible to do so. You are undoubtedly familiar with the recent action of the Secretary of Defense whereby he decided that the DoD will not use its finished product import quota into districts I-IV for the last half of this calendar year provided domestic product is available. This will impose a task of supplying an additional 30,554 barrels per day of jet fuel on the domestic refining industry. How well the industry performs on supplying this requirement will have a great influence on how much and how rapidly additional overseas procurements are returned. A quick reading of responses to our domestic jet fuel solicitation opened yesterday to cover our import quota indicates that there were 14 responses from 35 potential suppliers that were solicited. Among the 14 responses were three from those not currently supplying. We solicited 45.6 million barrels and statistically we received offers covering the full requirement. However, our buyers report that about 1.2 million barrels were not usable for tanker shipments or prices offered or considered unusually excessive. Latter will

be subject to further negotiation.

"In addition to the capability of the domestic industry to meet our returned overseas requirements, a factor of considerable concern to us in the Department of Defense is price. And when I say that, I'm talking in terms of considerable magnitude. For example, an increase of only 1¢ a gallon on JP-4 jet fuel would result in an annual budgetary increase of in excess of $60 million.

"We are fully aware, however, that price is a two-way street. We recognize that industry must have time to plan the effective utilization of its capacity. 'Short Fuse' invitations for bid and short term contracts do not provide that time. That is why we are currently considering longer term contracts.

"We also realize that our take of the total industry output is relatively small. However, I believe we are still its biggest single customer, and when your biggest customer becomes restless and uncertain, it's time for concern.

"I think from all of this, it is clear that military demand for domestic product may continue to increase to the extent of industry's present capability. I would hope and expect that the domestic petroleum industry would plan to meet these increases as they occur and at reasonable prices.

"I would also hope that the domestic industry would continue to add to its physical plant the capability and flexibility to meet the increasing demand for military product,

particularly jet fuel.

"Now a word or two about the petroleum situation in Vietnam.

"With respect to supply of petroleum products in that country, we believe a more appropriate word than 'escalate' these days is 'improvize.'

"As an example, we now have in-country thousands of rubberized containers for petroleum storage, ranging from 500 gallon to 50,000 gallon. These containers are being used in ways that were never intended but they have literally saved our lives, since our requirements have exceeded the capabilities of commercial facilities.

"Let me cite an example of a method used up until a few weeks ago to supply one of our air fields. Supply was affected by: Beach loading a tank truck on a barge; Towing the barge and truck out to a T-2 tanker at anchorage; Loading the tank truck from the T-2 tanker; Returning the tank truck to the beach where it proceeded to the airfield.

"That, Gentlemen, is the hard way! But it is getting the job done! And I am convinced that we will continue to meet our petroleum commitments regardless of the difficulties. Actually, as I believe you've already been told, product availability has caused us no difficulties in Vietnam. The problems we've had have been ones of in-country storage and distribution. And these problems, I'm happy to say, are gradually

diminishing as our military construction program starts to contribute to our capability.

"Let me say again, Gentlemen, it's good to be here, it's reassuring to see that the government has so much petroleum talent backing it up.

"And I hope and expect to be seeing many of you over the next few years.

"Thank you."

(Applause)

CHAIRMAN HAMON: Thank you, Mr. Muir, for that fine talk, which you delivered on behalf of Admiral Schleef.

I might say parenthetically, and I am not a refiner, have no stock in any company that is a refiner, but I do know on behalf of the industry, that they made a very sincere effort at an extreme dislocation in many cases of their refining capacity, to meet the bid. I am sorry that some of the products were not available for tanker delivery, and without offending those people, I must say that the price that they quoted was quoted at a loss and they did not want in many cases to bid but they felt it necessary to bid. And I hope that it will be adjusted amicably between your Department and the industry.

Now, I am going to vary the program a little bit more and call on Al Nickerson to give his report on the Committee on Emergency Preparedness for the Petroleum Industry.

Mr. Nickerson.

MR. NICKERSON: Mr. Chairman, the Committee on Emergency Preparedness held a meeting yesterday, approved a report which will be presented to you a little later in the meting, by Ted Nelson, Chairman of the Subcommittee.

We are very fortunate indeed in having present both the Chairman and Vice Chairman of the Council, Assistant Secretary Moore of the Department of the Interior, and the Director of Oil and Gas, Admiral Lattu, also the Governor, the Co-Chairman, Deputy Director of Oil and Gas, John Ricca.

Our purpose this morning is to present to you this report for your approval. And I should also like when the report has been presented to you, to move a procedure in respect to manuals which will be presented and prepared before the end of this year. It is the hope of the subcommittee chairman and of the committee that this assignment can be completed at or very close to the end of this year.

I would like Ted Nelson to make this report to you. I do so because I think he should have an opportunity to represent his group to you and tell you about the work they have been doing. I would like to say in my experience, I have never been associated with a group of men who have been more hard working and more effective. And I want to take this opportunity to thank the companies that have made these men available to the committee. Some of the companies have made more than one man available and some of the men have devoted virtually full time

to this work. In no other way would this work have been advanced as effectively as speedily as it has been.

I would like to turn the meeting over to Ted Nelson.

MR. NELSON: Thank you, Mr. Nickerson. Mr. Chairman, members and guests of the National Petroleum Council. Many of you will recall that the activities of this NPC Subcommittee for the completion of EPGA operating manuals were reviewed most recently in a report presented to this Council on March 1st of this year. That report included the review of the pertinent background information related to the formation of this subcommittee, and accordingly, I am not going to repeat that information in this presentation here today.

But what I will talk about is the activities of the subcommittee since its formation, with particular emphasis on the period since March 1.

The work assignment that was given to the subcommittee a year ago had several facets. One of these was the preparation of a general information handbook about EPGC that could be distributed to the petroleum industry and to the public, that would describe in a popular and easily readable style, the Government program of emergency preparedness for oil and gas.

Such a booklet was entitled "What Is The Emergency Petroleum and Gas Administration?" and was completed in January of this year, approved by the NPC Committee on Emergency Preparedness at that time and presented to the Council at its meeting on

March 1. This is the booklet that I refer to hear, (indicating) and you should have all received copies of it at the time of the March 1 meeting.

The response from industry and government with regard to this booklet has been quite complimentary and the Office of Civil Defense is now printing 75,000 copies of it for widespread distribution. The National Petroleum Council and the Office of Oil and Gas are participating in the distribution of the booklet to make certain that it reaches all important points in the oil and gas industry. I am sure that in the near future, you will be receiving a communication from Mr. Brown with regard to your interest and your needs in each of your companies for copies of this particular booklet.

Another facet of my subcommittee work assignment was to review and edit two EPGA instructional manuals which were being prepared by the Office of Oil and Gas. One of these is an organization manual which describes the organizational structure of EPGA and the responsibility and authority of key positions. And the other is and administration manual which sets forth details of salary, administration, budget preparation, materiels procurement, et cetera, to guide EPGA personnel in internal administrative operations.

The subcommittee has expended no effort on this phase of the work assignment to date because the Office of Oil and Gas has not yet finished the preparation of these manuals.

The latest advice we have is the manuals will be ready for review by the subcommittee sometime this fall.

Undoubtedly the most important facet of the subcommittee work assignment was the preparation of detailed operating manuals for each major organizational unit of EPGA. Initially this was defined as including the national and regional divisions for production, refining, supply and transportation, distribution and marketing, materials, manpower, communications, and facilities security. In addition, the divisions of foreign production refining and supply and transportation were included in the National EPGA organizational units.

Initially, the operating manuals for the gas transmission division and the gas distribution division were stated to be the responsibility of the Emergency Committee for Natural Gas, but we seemed to have inherited these recently, presumably because the gas people have been favorably impressed with the draft manuals that they saw being developed for oil and have asked my subcommittee to prepare similar manuals for gas under the subcommittee jurisdiction.

Initially also, the subcommittee work assignments specifically excluded operating manuals for EPGA staff officers, such as the Office of Program Coordination, the Office of General Counsel, the Office of Finance Counselor, et cetera. However, as work on the division operating manuals progressed, we found that it was necessary to write a manual for the Office of Program

Coordination in order to progress the division manuals. So we added this manual to our list. Later, the subcommittee decided to prepare operating manuals for all of the other EPGA staff officers in order to do a complete job and not leave some loose ends to result in further requests for help in this particular area.

Fortunately, it has been possible to partially balance these additions to the original work assignment of the subcommittee by summary deductions. Specifically, we were able to eliminate the operating manuals originally proposed for the regional EPGA organizational units. This was due to the fact when we got into the detailed preparation of some of the regional manuals, it became apparent there was a considerable amount of duplication of information that we had in the national manuals. The subcommittee decided, therefore, to prepare only one set of manuals, based primarily on the duties of the National EPGA organization but with sufficient reference to regional considerations that the manuals could be used by both organizations.

Another important development recently has been the subcommittee decision to consolidate several operating manuals in a single volume whenever it is logical and feasible to do so. This results in a very considerable reduction in the number of volumes that will be involved in this publication. Specifically, a reduction from what appeared to be as much as 19 volumes, if

each operating manual were to be published separately to a present figure of 10, based on the maximum amount of consolidation that the subcommittee considers to be desirable.

One of these manuals has been completed and approved by the NPC Committee on emergency preparedness and is ready to be presented to the Council today. Another is in final draft form and will be submitted to the Committee for Emergency Preparedness for approval in the near future. Five of the manuals are manual consolidation volumes, are being finalized by a special editorial task force and the remaining three are still in various stages of draft, review and discussion by the subcommittee.

The operating manual that has been completed and published is for the production in natural gas processing division. This is the large red document you received when you came into the room. You will note that the manual cover is a vinyl plastic that we think is durable, attractive and economical. Its color was chosen to match the characteristic EPGA red that the Office of Oil and Gas has been using to designate all EPGA documents. The physical form of the manual has been modeled after the typical resource engineering report that is used widely in the petroleum industry. This form places all of the text on one side and all of the tables, charts, grafts, et cetera, on the other side. Experience has shown that this is the most convenient report form for a detailed study use, and, of course,

it was part of our objective to prepare the manuals in a form that would have maximum utility as a working manual.

Section 1 of this manual provides for background information for understanding and use of the detailed operating procedures that are outlined in other sections of the manual. This section will be common to all of the EPGA operating manuals.

Appropriately, we think it discusses first the role of the Office of Defense Resources which Dr. Elee mentioned in his talk. The next identifies the claimant agencies which will represent various oil and gas consuming groups in contact with EPGA. Further, it explains the three basic time phases -- survival, recovery, and central programming that have been adopted as a framework for all emergency planning and operations.

And perhaps most important of all, it then describes how a general supply program, matching demand capability is put together, where the responsibility lies for various aspects of the planning process, and what the time frames are for the short, intermediat, wide and long range supply programs and what these programs might look like. Since the principal objective of EPGA is planning to assure continuity of adequate supply to meet essential requirements, we think that strong emphasis on the mechanics of the planning process is justified in every EPGA operating manual.

Section 2 of the manual is quite brief and covers

the functions, relationships, and duties of the Assistant Administrator who heads up the domestic petroleum operations group. A brief description is also given of the functions of each of the four operating divisions which make up the domestic petroleum operations group. This section, too, will be common to the operating manuals for each of these divisions.

The last section, Section 3, covers the functions, relationships, and duties and procedures that are involved in each organizational unit in the production and natural gas processing division. Starting with the director in his office and taking in turn each branch of the division, each section of each branch, and each unit of each section, there are 22 such organizational entities, which are dealt with in this manner in this particular manual.

Specific forms are suggested for a number of reporting and soliciting activities that will be involved, such as reporting a tankage to an area, making an application to condut a petroleum project, reporting inventories of unused casing and tubing, making application for requirements of drill pipe casing, tubing, et cetera. Also included are exactly how and where these statistical data are obtained, how project applications through EPCA and how responsibility and authority are distributed for each area of EPCA activity concerned with producing a natural gas processing.

In sum, the manual endeavors to describe the what,

who, when where, and why, and more importantly the how of each important operation involved in producing crude oil and natural gas to meet essential military and civilian requirements in national emergency as best we can visualize such a situation at the present time.

Now, the functions and relationships and duties and procedure for each organizational unit are written in quite a bit of detail so as to be of maximum usefulness to the Executive Reservists who are in those units who will deal directly with those units. Although we recognize that the circumstances of an actual emergency are difficult if not impossible to predict, and many changes will undoubtedly have to be made in these procedures before they can represent the most efficient operation for EPGA, it has been our philosophy that EPGA will benefit by having available at this time a series of suggested duties and procedures regardless of how much revision they may require from time to time.

Furthermore, we feel detailed manuals of this type will be useful in training reservists for the Executive Reservists, and in fact, we would expect suggestions for changes in the duties and procedures from the Executive Reservists as they test the use of them from time to time in various training exercises. We would like to emphasize that the present manuals are not intended to impose any constraints on freedom of action by EPGA personnel, and in fact, we actually view the preparation of

operating manuals for EPGA as a continuing process from the time that NPC develops and presents these basic operating manuals during the coming months until they are actually brought into use in an emergency. For this reason, the manuals are being prepared, you will note, so that it will be relatively easy to remove outdated sheets and insert new ones as changes are approved.

As I mentioned earlier, one additional manual is in final draft form and will be sent to the Committee soon for approval. Five of the manuals and they are manual consolidations, volumes are being put in final draft form by a special editorial task force and the remaining three to make a total of 10, are still in various stages of drafting, review, and discussion by my subcommittee.

As Mr. Nickerson mentioned, it is going to be our objective to have all of these manuals finished and our editorial work on the EPGA organization and administration manual completed by the end of this year so the subcommittee can be disbanded at the same time. However, this is still a sizeable and difficult job, as I am sure you will appreciate, and it is not possible to predict a specific completion date with very much accuracy.

In closing, I respectfully submit to the Council the operating manual for the domestic production and natural gas processing division of EPGA which will be a series of 10 EPGA operating manual volumes that we intend to try and finish and

present to the Council by the end of this year.

Mr. Chairman, that completes my report. Thank you, very much.

(Applause)

MR. NICKERSON: I would like to move the acceptance of the manuals described by Mr. Nelson.

(Motion seconded)

CHAIRMAN HAMON: All those in favor signify by saying "Aye."

(Motion carried)

MR. NICKERSON: Thank you, Mr. Chairman.

I should also like to move that after the Committee for Emergency Preparedness has reviewed and approved the subsequent manuals that have been described by Mr. Nelson, that they then be distributed by mail to the National Petroleum Council members and that after 20 days, the Chairman of the National Petroleum Council shall approve the manual if in my opinion the responses are favorable.

And I should like to move further that up to $15 thousand be appropriated by the Council to finance the publication of the entire series of manuals.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: You have heard the motion. All those in favor, signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: Thank you.

I must pay particular tribute to Al Nickerson and to Mr. Nelson for their very great devotion to a monumental task well done. And Mr. Nelson's committee has worked long and hard. We are really setting a fine example on this preparedness program to other industries. We are far ahead of them. And I think all of us can take pride in the fine work of Mr. Nelson and his committee and Mr. Nickerson and his committee. Thank you both.

Unfortunately, the chairman of the Agenda Committee, Mr. Follis', health didn't permit him to come. I might add that Mr. Follis' health is not of a serious nature in the sense of heart or lungs or anything like that. It is serious enough in that the airplane he was coming in from abroad lost compressurization and it damaged his inner ear canals temporarily, and he is unable on the advice of his physician to fly or will be unable to for two or three months. So in his absence, at his request, I acted as Chairman of the Agenda Committee, which met yesterday, and I will read the report.

Pursuant to the call of the meeting of the Agenda Committee of the National Petroleum Council, made by the Committee Chairman, Mr. R. G. Follis, in his telegram to the members on June 22, and with the meeting and its agenda having the approval of the Honorable J. Cordell Moore, Assistant Secretary of the Interior and Co-Chairman of the Committee, the Agenda Committee

met on July 18, 1966, at 3:30 p.m., in Washington, D. C.

Under date of July 18, the Honorable Cordell Moore addressed a letter to me, as Chairman of the National Petroleum Council, requesting the Council to undertake a study to determine current petroleum and gas transportation capacities, including natural gas transmission lines, crude oil, and petroleum produced pipe lines, crude oil gathering lines and major surplus production areas, inland water ways, barges, tank cars and tank trucks. The study should include estimates of the pipe line industry's ability to expand capacity over the near term through bottleneck removals.

As provided in the Articles of Organization of the Council, this letter was considered at the above-mentioned meeting of the Agenda Committee, at which meeting it was unanimously agreed to recommend to the Council the commitment of a committee to make the study as requested by Assistant Secretary Moore. In complying with the Assistant Secretary's request for this data, the committee undertaking the study should not suggest plans or programs.

I would like to have a motion approving the Agenda Committee's report on that.

(Motion made and seconded)

CHAIRMAN HAMON: All those in favor, signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: Motion is carried.

Under date of July 18, the Honorable J. Cordell Moore addressed a letter to me as Chairman of the Council, requesting the Council to undertake a study of the petroleum industry's exploratory and developmental activities, and recovery practices in the United States during the period from 1945 to 1965.

To the extent practicable, the study may include any comments the Council cares to make on the economic and technological factors which influence the level of exploratory and developmental activity. The choice of geographic areas for operation, the relative emphasis on development and simulated recovery versus exploration for a new field as provided in the Articles of Organization of the Council.

This letter was considered at the above-mentioned meeting of the Agenda Committee at which meeting it was unanimously agreed to recommend to the Council the appointment of a committee to make the study as requested by Assistant Secretary Moore.

In complying with Secretary Moore's request for appraisal and comment in connection with this subject, the committee which undertakes the study should not suggest plans or programs.

May I have a motion?

(Motion made)

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: Mr. Secretary, we will undertake the study.

I will now call on Harry Jackson, Chairman of the Committee on Effects of Electric Power Outages on Petroleum Industry Facilities.

MR. JACKSON: Mr. Chairman, Secretary Moore, members of the Council, distinguished guests. This report is submitted in response to a request made by the Honorable J. Cordell Moore, Assistant Secretary of the Interior, in his letter of February 1, 1966, to Mr. Jake L. Hamon, Chairman of the National Petroleum Council.

On November 9, 1965, the Northeastern portion of the United States experienced a massive power failure. An investigation of the power failure was immediately undertaken by the Federal Power Commission at the request of the President. One of the 19 major recommendations made by the FPC in its report of December 6, 1965, to the President, was directed to the petroleum industry. The FPC stated, in Recommendation No. 18, that motorists were unable to buy gasoline because gasoline pumps were dependent upon the system power supply.

The Council was requested by the Department of the Interior to undertake a study of the adverse effects of similar massive power failures on the oil and gas industries and to report its findings along with any recommendations for preventive measures which could be taken by industry and governments to reduce or eliminate any hazards to the petroleum industry and the public welfare.

The Committee on Effects of Electric Power Outages on Petroleum Industry Facilities reviewed the assignment, and decided to make a general assessment of this problem based upon existing detailed information obtained in previous NPC studies, together with other available sources of infomation. It was felt that an extensive new survey of electric power utilization by oil and gas industry facilities would not be necessary at this time.

The Scope. In assessing, in a general way, the adverse effects of a massive power failure on the oil and gas industries, two aspects must be considered. The first is with respect to what actual damage to physical facilities would result from such a power outage, and the second relates to the effect an electric failure would have on the ability of the industry to supply petroleum and gas products to meet military and civilian requirements.

Also, certain assumptions were made in order to define the term "similar massive power failures" as contained in

Interior's study request letter. The discussionset forth in this report is based on a utility power failure which (1) would not exceed a period of 7 days duration and (2) would be experienced in one broad geographical area, that is, the Northeast, realizing the improbability of a simultaneous failure throughout the entire United States.

With these assumptions in mind, the Committee has covered in its assessment of the impact of such failures on the oil and gas industry facilities, the four major phases of industry operations: exploration and production; transportation and storage; refining; and marketing.

Exploration and Production. As regards electric power requirements, the exploration phase of the oil and gas industries is virtually self-sufficient of approximately 40,000 wells being drilled currently in the United States each year, there is, at almost all of the drilling sites, because of location and the nature of the operation, a self-supplied power source--generally fuel-driven engines, pumps and generators. A utility power failure as defined in Section II would have no significant effect on exploration and drilling operations or the equipment and facilities.

Throughout the United States, located in 32 states, there are approximately 550,000 producing oil and gas wells. There are a variety of methods employed in lifting the oil and gas from the reservoirs and moving it through gathering lines

and lease storage tanks to transportation points. A power failure as defined in this report would not result in any significant damage to the production facilities. However, many pumping units, as well as gathering line systems, do depend on electric powered pumps for their continued operation. In event of utility power failure these facilities would be affected.

It should be pointed out, though, that in addition to the factor of wide geographical dispersion of wells, a large number of wells have a productive capacity in excess of the volume they are permitted to produce each month under the limitations imposed by state conservation or regulatory bodies. Therefore, production "lost" over a short period of time due to lack of electric power for pumping, can be made up rapidly, upon restoration of power by increasing the production rate. The aggregate effect of a short-term power failure on production, therefore, would be slight.

The next is Transportation and Storage. Gas Transmission. As indicated in the 1962 NPC report on Oil and Gas Transportation Facilities, there were over 238,000 miles of interstate gas transmission pipelines in the United States. An analysis of the survey data obtained for this study shows that, of approximately 800 compressor station installations above 1,000 HP located along these lines, only 5% were dependent on purchased electric power as the prime mover. The gas transmission and distribution pipeline operations primarily utilize natural gas

as the source of energy.

Natural gas pipelines differ from crude oil and products pipelines because they are not dependent upon refinery capacities or storage capacity that might be subject to shutdown in event of utility power failure.

Crude Oil and Products Pipelines. Crude oil pipelines transport crude oil to refineries or major terminal points for further shipment by another mode of transportation. As of 1961, crude oil trunk lines represented a total of 147,343 miles of pipeline, and products pipelines represented 53,200 miles, for a total of 200,543 miles of petroleum pipelines in the United States..

In the last several years the significant trends in pipeline transportation include large diameter lines, automation, centralized controls, automatic custody transfers, and expanded use of computers for complex problems in scheduling and operations.

In connection with the previously mentioned 1962 MPC transportation study, a detailed survey was made at that time covering 233 major crude oil pipeline systems, the flow of which was activated by 1,319 pump stations at which were located over 3,800 pumping units. A total of 75 of these pipeline systems, or 32%, were found to be entirely dependent on purchased electric power. One-hundred eighty-one systems or 78 percent were either partially or completely dependent on electric power. Of the 1,319 individuals pump stations located along these crude oil

systems, 759, or about 58 percent, were either partially or completely dependent on electric power as the prime mover.

From the same NPC survey, detailed information was also obtained for petroleum products pipelines. A total of 160 such systems were reported, 123 of these, or 77 percent, being totally dependent on electric power as the prime mover. One-hundred fifty-two systems, or 95 percent, were either partially or completely dependent on electric power. Along the 160 products pipeline systems represented were 660 inddividual pump stations, of which 80 percent were either partially or completely dependent on electric power. See Tables 1 and 2 for further details stated by geographical areas.

The pipeline facilities of the oil and gas industries continue to progress in technology for increasing the efficiency of operations. New pump stations built in the last several years are generally automatically controlled and equipped with more powerful electrically driven prime movers. As the trend continues toward electrification, the pipeline facilities become very highly dependent upon purchased electric power to energize the pumping units.

A massive power failure would generally have no serious effect on the physical pipeline facilities. Little, if any, damage to the lines, pumping or compressor equipment would be involved. In the case of pipelines totally or partially dependent on electric power, the rate of throughput would be

substantially reduced in event of power failure at some or all of the pump stations along the system. Many pipelines do have the ability to operate at reduced flow with only a few key pump stations functioning. Even if all stations were down, a few pipelines would be capable of continuing minimal flow due to gravitational pull. In an emergency situation when key pump stations are inoperable, portable pumps or standby generators can be utilized, as has been done in past emergency situations arising from hurricanes and floods, in order to continue the pipeline flow at reduced rates.

Other Transportation Facilities. Transportation by petroleum tankers or barges would not be affected by a power failure. Both are self-powered and can generally load or unload under ship power. Onshore loading and unloading facilities are susceptible to reduced efficiency or total inoperability depending on the extent of their reliance on electric power supplied from shore or inland sources. Power to marine installations could be temporarily supplied by berthed vessels or barges.

Storage Facilities. The 1962 survey of the NPC on Petroleum Storage Capacity covered most holders of crude oil and principal petroleum product inventories at refineries, pipelines, tank farms and bulk terminals. There were 395 million barrels of crude oil storage capacity reported and 754 million barrels of products storage capacity in the United States on September 30, 1962.

As of April 30, 1966, there were 249 million barrels of crude oil actually in storage, and 537 million barrels of petroleum products.

Although there is assurance of an ample supply of both crude oil and products throughout the United States, removal from storage tanks is primarily dependent on electric pumps. A temporary power failure would, in many cases, require a combination of auxiliary pumps and gravity flow to take off crude or products from the tanks. However, an electric outage would have no damaging effect on the facilities themselves.

The Petroleum Refining. The statements presented for discussion of adverse effects of power failures on refining operations are based on data available from a 1961 NPC survey. A total of 67 refineries were studied at that time, representing approximately 58 percent of the total United States petroleum refinery capacity. Of the total electric power requirement for operation of these refineries, 71 percent was found to be purchased from utilities and 30 percent self-supplied.

Also included in the 1961 NPC survey were 33 non-self-contained facilities, which is defined as a producing plant which must be operated as a part of a larger facility, and 55 self-contained chemical plants. The other non-self-contained facilities represented were dependent on purchased electric power for 53 percent of their power requirements. The electric power purchased for the self-contained chemical plants represented

94 percent of their power needs.

The power failure that occurred on the Northeast coast the evening of November 9, 1965, did not have a major effect on refinery operations. There was only one refinery that was shut down as a result of the power failure. Other refineries in the area continued normal operations due to either automatic switch-over to auxiliary steam equipment or because they were not actually being cut-off from their outside power source. Of the three refineries affected by the power failure, two were able to switch to auxiliary power sources, and the third resumed all operations within the following 24 hours without any serious damage resulting to the facility.

Most refineries older than 10 years are equipped with complete steam auxiliary equipment for continued operation, at reduced rates, in case of a power failure or any similar emergency. Although plants constructed during the last 10 years are essentially all electric and would experience a shutdown in the event of a power failure, they have sufficient steam auxiliary equipment to permit a normal shutdown with no damage to the facilities. However, where any refinery lacks the steam power to shut down in a rapid, orderly manner, there is a possibility of some damage to the facilities in event of a sudden cut-off of electric power.

Marketing. The marketing and retailing functions as related to the oil and gas industries would be handicapped but

not shut down in event of a massive power failure as defined in Section II. Because adequate oil and gas supplies are generally in storage at all times or would be obtainable from adjacent unaffected areas, there would be no problems relating to product availability in case of such an emergency.

It should be recognized, in this connection, that during a prolonged power failure, fuel demands would be greatly reduced due to the shutdown of manufacturing plants and businesses. Following the initial surge of people attempting to get home or to an assigned emergency post, traffic would be greatly reduced. Officially, travel within the affected area would most likely be discouraged because of the breakdown of traffic control devices, street lighting, and so forth.

The industry has many times demonstrated its willingness and ability to place the concern for the welfare of the general public over its own private interests when an emergency exists. This has resulted in the sharing of petroleum products stocks and/or equipment to assure supply to those in need.

Product delivery, which is primarily by truck, to both retailers and consumers would be affected only by slower loading and longer hauls. Also, most service station operators have had considerable experience with local power interruptions because of electrical and sleet storms, hurricanes and other emergencies.

In the case of the recent Northeast power failure and following the belated announcement that the power failure would last longer than originally anticipated, those service stations which normally operate during the night hours did take steps to get their pumps in operation through various means. While some motorists may have been unable to purchase gasoline with normal convenience, there were no reports of any serious incidents resulting from inability to procure gasoline in any community affected by the power failure.

Even though improvisation is the primary means of meeting an emergency, it is this same multiple choice such as the use of trucks as mobile service stations, which offers the greatest assurance that the needs of the community or area can be met. At the same time, having no set solution does mean that a varying amount of lead time will be required before the industry responds. Most natural disasters such as floods and hurricanes are of such a nature that advance warning can be given. An act of military aggression would trigger a rapid response. However, a power failure of unknown origin would generally not initiate immediate action during the initial hours unless information was forthcoming that it would probably continue for a longer period.

It should be remembered that there is a difference between serving needs and providing convenience. The marketing segment's conviction that they would be able to satisfy the

public's requirements during such an emergency does not imply that fuel supplies would necessarily be as convenient to obtain as under normal conditions.

Conclusions. In recent years there has been and there still continues a definite trend toward electrification in the petroleum industry, particularly in the crude and products pipeline transportation and refining phases of the industry. Presently, these two phases show the highest dependency upon purchased electric power.

In the event of a massive power failure within the terms of this study, damage to the oil and gas industry facilities would be light. The potential problem area would be at those refineries unable to shut down in an orderly fashion due to insufficient auxiliary steam equipment.

The assurance that the industry could continue supplying requirements for petroleum products and gas in a massive power failure can be measured in terms of its widespread pattern of supply and distribution, the geographically dispersed location of its facilities and its considerable inventory position. In event of such an emergency, therefore, the adverse effects upon the oil and gas industries would be minimal and no extreme problem would arise in meeting product requirements, assuming improvisation in the area of distribution, particularly at the retail level.

In respect to gas, the impact would be slight in any

phase of operation.

The Committee does recommend that future detailed surveys of oil and gas industry facilities, whether conducted by the industry or by the Government, should be designed to provide for the gathering of additional data relating to electric power requirements and auxiliary generating capabilities, especially in the pipeline and petroleum refining phases of the industries' operations. Such information has applicability not only to temporary massive power failure situations, but also to the field of emergency planning.

Recognizing the general dependency of the petroleum industry on purchased electric power, it is the suggestion of the Committee that those planning to construct new facilities, or expand existing facilities, examine the economics and operational feasibility of auxiliary generating and pumping facilities. In such instances the expertise and views of the electric power industry would undoubtedly be available and prove most helpful.

A classic example of a potential blackout of power which the Committee found occurred in the Empire State Building in New York when after several hours of effort the rescue squad broke through a wall of a long stalled elevator, the chief anxiously inquired "Are there any pregnant women aboard?" whereupon a large gentleman pointedly retorted, "We haven't hardly even met."

I wish to acknowledge with thanks the generous contributions of the working committee, of John Ricca and Vincent Brown, as well as for the timely suggestions advanced by the several members of the main committee.

Mr. Chairman, I move the adoption of the report.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the adoption of the report signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: Thank you, very much, Harry, for a very fine report.

This report was made at the request of the Committee on Studying Massive Shutdown Facilities under the direction of Cordell Moore, and I believe that the petroleum industry is the first industry to have answered this request.

I am now going to call on J. Howard Rambin, Chairman of the Committee on Future Petroleum and Gas Producing Capabilities.

Mr. Rambin.

MR. RAMBIN: Mr. Chairman, Mr. Secretary, and members of the National Petroleum Council. In early 1965, the Honorable John M. Kelly, then Assistant Secretary of the Department of the Interior, requested that the National Petroleum Council, using its previous studies as a basis, make projections to the

year 1970, of the capacity of the United States petroleum industry, to produce crude oil, natural gas, and natural gas liquids.

In response to this request, the Council established the Committee on Future Petroleum and Gas Producing Capabilities to carry out this assignment. In addition to Secretary Kelly's request, the Interior Department furnished certain assumptions set forth in Charter 4, upon which the Committee based its report.

On receiving these assumptions, attention was directed to the formulation of precise definitions of crude oil and natural gas productive capacities and natural gas liquids productive capacity. Briefly stated, United States productive capacity is the aggregate of the crude oil, natural gas, and natural gas liquid that could be produced on any given date from all of the then existing oil and gas wells located in the United States without the loss of recoverable reserves.

Such productive capacities should not be confused with actual production rates or with the amount of oil, natural gas, and natural gas liquids that could be produced on short notice with present facilities.

Thus, productive capacity represents potential production rather than immediate or actual production. In carrying out its assignment, the Committee had two distinct tasks. Number 1, the updating to January 1, 1965, of productive capacity estimates previously reported by the NPC, relying

principally upon an analysis of historical data. And secondly, the projection of productive capacity estimates to January 1, 1970, necessitating the use of a methodology adapted to a situation where historical data are unavailable.

With respect to the January 1, 1965, estimates, the report considered estimates prepared by Council committees for a number of prior years. All of the estimates of future productive capacity included in this report are necessarily based upon a continuing program of exploration and development. Accordingly, should the actual program vary substantially, the productive capacities would necessarily vary from those estimated in this report.

In utilizing this report as a tool for emergency planning, it should be recognized that the productive capacity of the United States at any given point in time, during the estimated period, would be as indicated. Any increase in actual production under emergency conditions would be dependent upon a number of policy determinations, including such factors as material and manpower allocations, and available transportation facilities.

On the other hand, any increase in productive capacity would require an expanded exploration and development program.

To summarize the findings of the Committee, we have prepared this chart, illustrating the productive capacities at

the beginning of each year of the period of the report -- for crude oil in green, natural gas liquids in blue, and natural gas in pink. By beginning on January 1, 1965, the current report establishes continuity with the preceding NPC report on Estimated Productive Capacities which included capacities on January 1, 1964.

NPC, as noted in the chart, crude oil estimated productive capacity January 1, 1965, 1.170 million barrels per day. 1970, January 1, 12.613 million.

Natural gas liquids, 3.300 million, January 1, 1965. 3.356 million, January 1, 1970.

Natural gas, 106 billion cubic feet per day in 1965, to 112 billion cubic feet per day in 1970.

In closing, I want you to know that this report represents the contributions of a large number of dedicated and knowledgeable members of our great industry. In particular, I pay tribute to our Vice Chairman of Crude Oil, Mr. Brockett, Vice Chairman of Natural Gas, Mr. Cecil Loomis, and our government Co-Chairman, Admiral Lattu.

I cannot commend too highly the excellent performance of our coordinating subcommittee for Future Crude Oil Producing Capabilities under the chairmanship of Henry Waszkowski, Jr., of Mobil Oil Corporation. And our coordinating subcommittee for Future Gas and Natural Gas Producing Capabilities under the chairmanship of Ed Turner, of Phillips Petroleum Company.

I also wish to express thanks to all companies for the great help that they gave us in accumulating the data necessary to put these facts together.

Mr. Chairman, this report represents the completion of our assignment, and I move its adoption.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the adoption of this report, signify by saying "Aye."

(Aye's)

CHAIRMAN HAMON: Thank you, very much, Howard, for a wonderful report, which will be referred to for many years as an authority. And we appreciate the fine work you and your committee have done.

Next, I am going to call on Richard McCurdy for an interim report as Chairman of the Committee on Effects of New Technology on the Petroleum Industry.

Mr. McCurdy.

MR. McCURDY: Thank you, Mr. Chairman.

Mr. Secretary, guests, and members of the Council. At our March 1st meeting, I reported to you progress on this assignment with respect to the organization of the work to be done and in respect to the manner in which the results would be presented.

At the present time, both working subcommittees are

essentially complete, both have prepared detail outlines of the work to be done. In the main, the work assignments have been completed and work has begun on the main body of the study.

I might observe it is already evident that the product of this study is going to be something quite voluminous, at least as far as the working papers are concerned. This will probably also be true of the final product. On the other hand, the diversity of the technological projects also makes it possible to organize the work so that it can proceed on many fronts at once.

And so we are optimistic that it won't require an undue amount of time to complete. By the same token, the wisdom of the decision to produce a summarized and readable version in addition to the reference work is quite clear.

Thank you, Mr. Chairman.

CHAIRMAN HAMON: Thank you, Mr. McCurdy.

I am going to call on Admiral Lattu, Director of the Office of Oil and Gas, for any remarks he may have to make.

ADMIRAL LATTU: Mr. Chairman, I have just two or three remarks. First, this information bulletin was sent to all of the military war colleges and they were very pleased to receive this and it is also in their libraries. Copies also were sent to the Petroleum Planning Committee in NATO, to each one of the members. They were very pleased with it. They were very much amazed that it was unclassified. I think this will help them

in each one of the countries to be better planned.

I don't think I can add any more to our Chairman's remarks and each one of the Chairmen of the Committees, to the very excellent reports that have been submitted. And I can only add that it has taken a great deal of work from all of the people involved and we greatly appreciate the contributions by each one of the companies and the manpower to do these jobs.

Our planning to date is going very well. We have 420 people aboard. Our recruiting has been excellent this last year. All except three of the regions have had their first planning sessions and training sessions. These three will be finished by October.

Secretary Cordell, I can report to you that the Interior Department with the cooperation of teamwork of the oil industry is ready and available for any emergencies. You can so report to the Secretary and the White House.

The only other remark I have is that I greatly appreciate the courtesies, fine cooperation, that your Chairman, Jake Hamon, has shown to me and my staff. We have used him many times when people going through Dallas have called on him, asking for advice and he has always been available. And, Jake, we are going to miss you and want to thank you very much for the fine leadership you have given during the last two years.

CHAIRMAN HAMON: Thank you.

(Applause)

used impressed paper

CHAIRMAN MAMON: Next is a Resolution in Memoriam to J. S. Bridwell, which will be presented by Perry Bass.

MR. BASS: Mr. Chairman, I have the following Resolution:

WHEREAS the Members of the National Petroleum Council were deeply grieved to learn of the death of Joseph Sterling Bridwell, age 81, in Wichita Falls, Texas, on May 9, 1966, following a brief illness; and

WHEREAS Mr. Bridwell was an enthusiastic and aggressive member of the Council since its formation and took an active part in all of its deliberations and decisions, he was highly esteemed and respected by the members and his views and wise counsel were genuinely appreciated; and

WHEREAS Joseph Sterling Bridwell was born March 23, 1885, in North View, Missouri, he attended public schools there and completed his education at Marsh Field, Missouri High School. On January 29, 1909, he came to Wichita Falls, Texas, not long after arriving he discarded selling his wire stretching device and entered into the insurance and real estate business. After the discovery of oil in Electra, Texas, in April, 1911, he was quick to see the potential of the oil business. His first venture in oil was in 1913, when he obtained a farm out from the Texas Company covering 80 acres, on W. T. Wagner land near Electra, which subsequently proved highly productive. A partnership with the late L. C. Hedwig was previously formed and operated

this and other acquired properties under the name of Bridwell and Hedwig for 14 years thereafter. In the beginning, Mr. Bridwell's complete lack of knowledge of the oil business was more than offset by the experience of his partner, Bull Hedwig, a native of Pennsylvania. This partnership continued until 1927, when he began operating under the name of Bridwell Oil Company. At the time of his death he was one of the leading oil producers in the Southwest. He was likewise the owner of thousands of acres of choice farm and ranch land located in several states. His purebred Hereford cattle were widely acclaimed and nationally known.

Wherever Mr. Bridwell applied his boundless energy, in oil, in land, in cattle, in education, in the cause of soil conservation, in philanthropy, in responsible citizenship, there arose in his footsteps a monument to his labor. His abilities could be recognized in the scope of diversity of his interests---widespread, sweeping and substantial. The empire builder, distinguished citizen, influential leader--they are an outline of the imagine created among his fellow men during the long years of the life of Joseph Sterling Bridwell.

NOW, THEREFORE, BE IT RESOLVED this Resolution of affection and appreciation be placed in the Minutes of the National Petroleum Council; and

BE IT FURTHER RESOLVED that this expression of our deepest simpathy and love be forwarded to his daughters, Mrs.

Margaret Bridwell Battle, 2200 Mermar, Wichita Falls, Texas, and to Mrs. Joseph Bridwell Reilly, Mountain Shadows West, Scottsdale, Arizona.

Mr. Chairman, I move this Resolution.

CHAIRMAN HAMON: Will you all stand in silent tribute to Mr. Bridwell.

(Silent tribute)

CHAIRMAN HAMON: The Resolution is passed and will be sent to his daughters.

Next, I am going to call on Mr. Earl Baldridge, Chairman of the Nominating Committee of the Council.

Mr. Baldridge.

MR. BALDRIDGE: Mr. Chairman, Members of the Council, and guests.

The Nominating Committee recommends the nomination of James Donnell, II, as Chairman; Jack Abernathy, as Vice Chairman; Vincent M. Brown, as Secretary and Treasurer.

I move that these names be adopted.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the election of those three men signify by saying "Aye."

(Chorus of "Ayes.")

MR. BALDRIDGE: The Committee recommends for the Agenda Committee the names of R. G. Follis, Jacob Blaustein,

Howard Boyd, Bruce Brown, L. F. McCollum, Jake L. Hamon, John M. Kelly, H. M. McClure, J. Howard Marshall, John E. Swearingen, and J. Ed. Warren.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the election of those gentlemen to the Agenda Committee signify by saying "Aye."

(Chorus of "Ayes.")

MR. BALDRIDGE: We recommend on the Appointment Committee, Frank N. Ikard, E. D. Brockett, F. Allen Calvert, George F. Getty, II, M. L. Haider, Fred L. Hartley, J. Howard Rambin, Jr., C. Pratt Rather, M. H. Robineau, Roland V. Rodman, and Arch Rowan.

CHAIRMAN HAMON: Is there a second?

(Motion seconded)

CHAIRMAN HAMON: All those in favor of the nomination of those gentlemen signify by saying "Aye."

(Chorus of "Ayes.")

CHAIRMAN HAMON: Thank you, very much, Earl.

Now, it is with regret that I say my farewell to you gentlemen as Chairman of the Council. I want to particularly thank Secretary Udall, Secretary Moore, Admiral Lattu, John Ricca, Jake Simmons, Jack O'Leary and John Kelly, while he was in the Department and since he has been a member of the Council,

for their great help to me in my duties as Chairman.

I am also grateful to Vince Brown and to all the members of the National Petroleum Council staff. I am indebted, of course, to the great and unselfish help of Jim Donnell, R. G. Follis, Bruce Brown, and Barney Majewski in particular and to all of you who have worked so hard on these very demanding committee assignments.

It has been a pleasure to work with you. You have got a great chairman coming up. And I thank you very much.

(Standing ovation)

CHAIRMAN DONNELL: Mr. Hamon, Secretary Moore, members of the Council, as you can see I had not too long, but a short acceptance speech which I think would be most inappropriate at this time. I only would like to say that I appreciate the honor to which you have given me and I am sure with the cooperation of the members of this Council, in the year ahead, we will continue to work effectively in helping the Department of the Interior.

I think you all know Jack Abernathy, but you might stand, Jack.

(Applause)

CHAIRMAN DONNELL: We have one more report. That is the report on the finances of the Council. Vince Brown.

MR. BROWN: On June 30, 1965, the cash balance in the general operating fund was $2,323.00. During the fiscal

year 1966, that is July 1, 1965 to June 30, 1966, we received from all sources, a total of $144,209.00, 96 percent of which came from you, the members of the Council, in the form of your annual contributions to NPC operations.

In fiscal 1966, disbursements for basic operating expenses were $116,935.00. Committee projects cost an additional $30,200.00 for a total outlay of $147,136.00.

At the close of the fiscal year on June 30, 1966, there was a balance of $9,396.00 in the general operating fund. With respect to the contingency reserve fund, $10,000.00 was transferred to the general operating fund and the balance in the reserve fund is now $50,000.00.

This being the first meeting of the Council in this current fiscal year, we wish to submit at this time a proposed budget for your consideration and authorization, in order to cover all Council operations in the new fiscal year 1967. The budget amount recommended by your officers is $131,000.00 for basic operations and $29,000.00 for Committee projects, for a total budget of $160,000.00.

Following action by you today on a new budget, letters requesting your individual contributions will be sent out to you starting tomorrow.

(Laughter)

CHAIRMAN DONNELL: Vince says we only have $3,000 in the treasury.

MR. MAJEWSKI: I move the adoption of the budget and then after that I want to be recognized a moment.

(Motion seconded)

CHAIRMAN DONNELL: It has been moved and seconded that the budget be adopted as submitted. All those in favor signify by saying "Aye."

(Chorus of "Ayes.")

CHAIRMAN DONNELL: Opposed?

(No response)

MR. MAJEWSKI: Mr. Chairman, I wish to have a committee appointed to draft an appropriate resolution of appreciation for the terrific service and record and achievement by Jake L. Hamon. I could say his middle name, but I don't know it. "Lovely", I think. He is a swell guy. I should like to move that by a rising vote of affirmation.

(Standing ovation)

MR. HAMON: Thank you, Barney, and thank you, gentlemen.

CHAIRMAN DONNELL: Secretary Moore, do you have something?

SECRETARY MOORE: What I have to say I can say in a very few seconds. On behalf of the Department of the Interior, Secretary Udall and myself, and a greateful government, I would like to tank all of you for the service that you have rendered to this nation over the past 20 years. I don't think any where

would you find 100 men more knowledgeable of the petroleum industry or more selfless in their devotion to their country and on behalf of the same group of people, I would like to thank you, Jake, for the tremendous assistance you have given us in the past.

I know we will get this same thing from Jim Donnell in the future, but it has been a real pleasure to work with you, to work with all of you. Thank you.

(Applause)

CHAIRMAN DONNELL: Admiral Lattu, do you have anything?

ADMIRAL LATTU: No.

CHAIRMAN DONNELL: I think before we adjourn, I would like to remind the gentlemen who have given reports to come forward and be available to the press who I presume are still waiting outside.

The meeting is adjourned.

(Whereupon, at 1:15 o'clock p.m., the Meeting of the National Petroleum Council was adjourned.)