The original documents are located in Box D33, folder "Energy Crisis Seminar of the Producers' Council, Grand Rapids, MI, October 18, 1972" of the Ford Congressional Papers: Press Secretary and Speech File at the Gerald R. Ford Presidential Library.

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NOTES

GRAND RAPIDS, MICH.

OCT. 18, 1972

HOUSE OF REPRESENTATIVES, U.S.
OFFICE OF THE MINORITY LEADER
PUBLIC DOCUMENT

OFFICIAL BUSINESS

Gerald R. Ford
M.C.

WEDNESDAY

3 P.M.

ENERGY CRISIS SEMINAR OF THE
PRODUCERS' COUNCIL

KENT STATE ROOM
PANTLIND HOTEL

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S. A. MORMAN & Co.

BUILDERS SUPPLIES

300 FRANKLIN STREET, S.W.
GRAND RAPIDS, MICHIGAN 49502
616—245-0583

October 2, 1972

P/also get me copy of Task Force report on Energy.

The Hon. Gerald R. Ford, M.C.
Office of the Minority Leader
House of Representatives
Washington, D.C. 20515

Dear Jerry,

We are delighted to hear that you can be with us October 18 to deliver the keynote speech at the Energy Crises Seminar given by Producers' Council at the Pantlind Hotel, Kent State Room. We will look for you about 3:00 p.m.

Again, you will be most welcome to stay for a drink and dinner if you like. We understand, though, that you may find it necessary to leave after an hour or so.

Also, we are aware that the whole thing is conditioned on the Congress adjourning or recessing before the 18th.

A Mr. Bowersox, of the National headquarters of Producers' Council, located in Washington, will send you some additional background material, which of course you may use if you see fit.

We look forward to seeing you on the 18th. Our members are enthusiastic about having you with us, and I am sure our guests will be also.

Thank you for finding the time to do it.

Cordially,

S.A. MORMAN & CO.

John C. Baxter, Pres.

JCB/ps

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The Producers' Council, Inc. news 1717 MASSACHUSETTS AVENUE, N.W. / WASHINGTON, D.C. 20036 (202) 667-8727

CONTACT: Francis X. Brown
(202) 667-8727

DATE: July 25, 1972
FOR IMMEDIATE RELEASE

PRODUCERS' COUNCIL TO PRESENT ENERGY CONSERVATION SEMINAR

Some practical suggestions on how to reduce heating and cooling costs and conserve energy will be outlined by a group of Producers' Council members during a series of Energy Conservation Seminars to be presented in over 50 major cities across the nation.

Developed as a service to the construction industry, in response to numerous statements from government officials and others of a growing "energy crisis", the educational seminars will stress how to effect the most efficient use of energy through proper initial design, and through proper utilization and application of building products and equipment.

Technical staffs of key manufacturers, whose products have a direct relationship to the energy problem, have developed comprehensive presentations. Considerable attention is devoted to "first costs vs. life cycle costs" and the economic fallacy of the "low first-cost syndrome."

Attending the half-day seminar, which will be presented in cooperation with the Council's local chapters, will be owner/investors, architects, engineers, building mangers, contractors, government officals and others.

-more-

ADD I --PRODUCERS' COUNCIL TO PRESENT ENERGY CONSERVATION SEMINAR

The program format in each city will be a keynote address on the extent of the energy crisis, followed by five 15 minute sessions illustrating energy saving ideas in the selection and application of insulation...lighting...glass...heating and air conditioning...and utilities. Exhibits, demonstrating some of the energy conservation ideas, will supplement the educational portion of the program.

Sponsors are: American Public Power Association; American Gas Association; Amspec, Inc.; Apache Foam Products; Armstrong Cork Co; Barber-Colman Company; C-E Glass, Inc.; Electric Energy Association; W. R. Grace and Co.; Grefco, Inc.; Johns-Manville Corp.; Libbey-Owens-Ford Co.; Owens Corning Fiberglas Corp.; PPG Industries, Inc.; Silbrico Corporation; Westinghouse Electric Corp.

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(202) 667-8727

FOR IMMEDIATE RELEASE
August 17, 1972

INTERIOR SECRETARY MORTON TO SPEAK AT PRODUCERS' COUNCIL ENERGY SEMINAR

Secretary of the Interior Rogers C. B. Morton and Arthur F. Sampson, acting administrator, General Services Administration,head a list of prominent officials and energy experts who will participate in an Energy Conservation Seminar being presented by Producers' Council in 52 major cities across the nation, beginning September 6th.

The secretary will keynote the Washington, D.C. meeting on September 12th and the Cleveland, Ohio meeting on October 10th.

Sampson is scheduled to be a keynoter in San Francisco on September 12th; in Philadelphia on September 27th; New York on October 4th; Honolulu on November 13th; and Pittsburgh on November 16th.

Participation of these two top government officials is indicative of the high national priority being given the energy problem and efforts being extended to alert the nation that energy must be used more efficiently if our present reserves are to meet the increasing demands of modern civilization.

Prime objective of the half-day seminars is to demonstrate, through technical presentation and exhibits, how operating costs can be cut and how energy can be used more efficiently through better design and better

ADD 1 --INTERIOR SECRETARY MORTON TO SPEAK AT ENERGY SEMINAR

initial selection and application of building products and equipment.

Attending in each city will be owner/investors, architects, engineers, contractors, subcontractors, government officials, school and hospital administrators, manufacturers and others.

Sponsoring Council members are: American Gas Association; American Public Power Association; Amspec, Inc.; Apache Foam Products; Armstrong Cork Co.; Barber-Colman Company; C-E Glass, Inc.; Electric Energy Association; W. R. Grace & Co.; Grefco, Inc.; Johns-Manville Corp.; Libbey Owens-Ford Co.; Owens-Corning Fiberglas Corp.; PPG Industries, Inc.; Silbrico Corporation; and Westinghouse Electric Corp.

Other keynoters, and the cities in which they will be speaking, are: Chicago --Walter Meisen, assistant commissioner for construction management, General Services Administration; Birmingham and Nashville--John F. Galuardi, acting commissioner, Public Buildings Service, General Services Administration; Hartford --Dan Luskin, commissioner of Environmental Protection, State of Connecticut; San Diego --Dr. Gerald Johnson, director, Division of Applied Technology, Atomic Energy Commission; Cincinnati --John Larson, assistant secretary for policy and programs, Department of the Interior; Baltimore --Richard S. Bodman, assistant secretary for management and budget, Department of the Interior; St. Louis --Marvin E. Jones, chairman, Missouri State Public Services Commission; Portland, Oregon --Donald Frisby, president, Pacific Power Company;and Albany and Syracuse -- Joseph C. Swidler, chairman, Public Service Commission, State of New York,and former chairman of Federal Power Commission. Keynoters for other cities on the itinerary are in the process of being confirmed.

Registration information can be obtained by contacting local Producers' Council chapters or the national office located at 1717 Massachusetts Avenue, N.W. Washington, D.C. 20036.

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gsa

News Release

UNITED STATES GOVERNMENT
GENERAL SERVICES ADMINISTRATION

Office of Information — Room 6117 — 18th and F Streets, NW. — Washington, D.C. 20405 — (202) 343-4511

September 29, 1972
FOR IMMEDIATE RELEASE

GSA #5904

GSA Chief To Keynote

Five Energy Seminars

Arthur F. Sampson, head of the General Services Administration, has been invited by the Producers Council to keynote a number of energy conservation seminars throughout the country.

The seminars, many of which are to run concurrently, feature energy experts in some 50 cities.

"President Nixon has expressed continuing interest in our efforts to conserve energy in construction and use of federal buildings," Sampson said.

The seminars focus on ways to reduce operating costs and to use energy more efficiently through better building design and use of materials. Sampson said that GSA already is governed by the following considerations in its building designs:

--availability of automatic or individual heating and cooling controls;

--working hours during which the building is to be occupied;

--type of material on the exterior;

--general interior design;

--use of glass with its relatively high heat transmission coefficient;

--type of concrete finish;

--overuse of building material for structural safety standards that are necessarily high.

In addition, as a pioneer project in the event the energy problem develops into a full bloom crisis, GSA is examining sites for a model building from the standpoint of energy conservation, Sampson said.

NIXON PRESIDENTIAL MATERIALS

Meanwhile, in operating many federal buildings today, GSA saves energy through such measures as reducing operating hours of air-conditioning and educating occupants to turn off lights that aren't being used.

Sampson speaks at the Commodore Hotel in New York on October 4 at 1:15 p.m.

# # #

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This suggested keynote speech is being provided as an "insurance factor" in the event your keynoter has to cancel at the last minute and a substitute must be obtained on short notice.

KEYNOTE SPEECH

ENERGY CONSERVATION SEMINAR

Seeing so many here today is, to me, an indication of the concern most of us have over this energy crisis . . . a crisis that is certain to have a dramatic impact on the growth of the building industry.

For, no matter how you slice it, the energy crisis is going to affect all of us. If we don't come up with better design, better construction, and better selection and application of building products and equipment, there is going to be restricted growth, less construction, unhappy consumers, and less business for all of us.

Let's dig a little deeper into the problem and find out what we are faced with.

Let's briefly review the overall energy balance and the prospective trends regarding energy supply and demand in the years ahead.

In 1971, this nation consumed close to 70 quadrillion British thermal units. Included in the total are some 5.5 billion barrels of oil, 511 million tons of coal, and 22 trillion cubic feet of natural gas. These totals are supplemented by relatively small quantities of hydropower and uranium.

In the last ten years, the world has consumed as much petroleum as was produced during the entire century prior to 1959 -- and the United

States is the leading energy consumer. With only six percent of the world's people, we consume 35% of the world's energy. And, our energy consumption is expected to increase in the years ahead as our population increases.

A National Petroleum Council Study projects the growth of energy consumption in the United States by some 50% to a total in 1980 in excess of 100 quadrillion BTUs. It is estimated that by 1980 nuclear energy will have expanded some fortyfold over 1970 and will be supplying close to 10% of total energy consumption. Coal consumption will have increased to 800 million tons, with natural gas and hydropower expected to increase only slightly. Petroleum consumption is expected to show a dramatic increase, with an annual consumption of 8.3 billion barrels in 1980, as compared with 5.5 billion barrels in 1971. Most of the increase, incidentally, is expected to be supplied by the Middle East, which is hardly a stable area, politically.

And, competing for this Middle East oil will be other consumer nations. For example, 80 percent of Japan's energy comes from oil . . . 87 percent for Western Europe. By 1980, Japan's consumption will quadruple and Western Europe's will double.

The Common Market nations of Europe are, today, embarked upon a common community policy for energy. The objective of this policy is threefold:

- to increase and coordinate efforts in research and development
- to secure an adequate supply of energy at low and stable prices
- to create a common market for energy.

So, concern is not limited to the United States alone. The concern is worldwide.

The Ford Foundation has recently undertaken a 15-month, $2-million study to "help prepare an informed and reasoned base for a national energy policy."

In testimony before the Interior and Insular Affairs Committee of the House of Representatives, George A. Lincoln, director, Office of Emergency Preparedness, said: "National energy policies are now in the same category of importance as national security and foreign policy, and need to be given the same level of attention.

"Energy security is rapidly becoming a critical component of national security."

We must assume, then, that the shortage is real and that it is here now.

What do we do?

"Nuclear and coal," according to a recent speech by James R. Schlesinger, chairman, U.S. Atomic Energy Commission, "are the energy sources in which our own resources permit far more extended uses in the foreseeable future without undue dependence on overseas supplies. They afford major possibilities for substitution."

Continuing, the chairman stated that a recent National Power Survey by the Federal Power Commission estimates that by 1990 53% of thermo-electric generating capacity in this country will be nuclear. The AEC's breeder development is intended to increase by a factor of 60 or 70 the exploitation of the energy content in uranium."

This is an optimistic statement. Many hurdles must be cleared before projection becomes fact. Power plant siting is one of the biggest.

In the meantime, what can the building industry do to conserve energy . . . to utilize more efficiently the energy that is now available?

Many practical suggestions will be offered today by subsequent speakers. The members of Producers' Council are to be commended for taking the initiative in researching the energy problem, as it relates to them, and making the findings available to the construction industry -- not only here, but in 52 other cities across the United States.

All of us must help.

. The designer must design better -- considering more carefully, for example, the siting of a building to enhance natural lighting and,

at the same time, reduce the air conditioning load and heat loss.

. The builder must build better . . . double checking to make sure the products and equipment installed to conserve energy are installed properly.

. The manufacturer must devote more funds to research and development. Better methods of insulation, better environmental control systems, and better heat transfer equipment, etc., will be required. The producer who is doing something about this problem today is the producer who will have the competitive edge tomorrow.

. And, most important, building owners can advance significantly the energy conservation cause by adopting an open-minded attitude toward utilizing advanced systems and building materials. Unless owners are willing to purchase these innovative systems and materials -- which may cost more initially, but less over the life span of a building, considering savings in maintenance and operating costs -- energy conservation will probably be effected by other means.

There is already talk of limiting demand for certain fuels . . . of raising prices to restrict use . . . and instituting, through building codes, regulations governing:

. maximum allowable wattage per square foot for lighting purposes

. maximum allowable brightness for advertising purposes

. maximum heat settings that will be permitted for different uses

. the minimum temperature that must be arrived at before air conditioning can be used.

Before closing, I would like to read to you several important recommendations pertaining to energy conservation which resulted from the International Environmental Conference sponsored by the General Services Administration last April. These recommendations reflect the thinking of many knowledgeable people and are worthy of careful study by all of us. They are:

1. Design for life cycle cost rather than initial cost.
2. Develop a procedure to create ad hoc design teams including all disciplines to solve design and environmental problems.
3. Consider designing a facility to be as self-contained as possible. Resources such as power and water (except for startup and emergency) should not be drawn from a community's resources.
4. Propose standards to optimize (minimize) energy consumption in building operation.
5. Identify the engineering and economic advantage of total energy for private and public building clusters.
6. Identify and use the building materials that require the least amount of energy for their production.
7. Consider using exhaust air to precondition incoming air. Also consider use of waste heat from utility sources, such as lighting, so that they will contribute to the heat values for the building. Locate buildings near power plants in order to use waste heat.

8. In general, central heating and cooling distribution plants should be used wherever possible.

9. Reduce environmental requirements as much as possible. For example:

   a. Maintain lower temperature in the winter.

   b Permit higher dry bulb temperatures in air-conditioned space in the summer.

   c. Do not heat, cool, or illuminate unoccupied space, passageways, lobbies and similar space to the degree of fully occupied space.

10. GSA should allocate and limit quantities of energy allowable, by building occupancy and use, in all of its buildings.

The energy crisis is a critical problem. It is not someone else's problem. It is your problem . . . my problem. It is a problem, the solution to which, requires team action.

This seminar today is a start in that direction.

end

DEPARTMENT of the INTERIOR

OFFICE OF THE SECRETARY

news release

For Release to PM's, September 12, 1972

MORTON CALLS FOR BETTER ENERGY HOUSEKEEPING

In a major address today before the Producers Council Energy Conservation Seminar in Washington, D. C., Secretary of the Interior Rogers C. B. Morton said that, "although we have not experienced a full-blown energy crisis, the experiences of the last months have been invaluable."

Citing the increases in America's energy demands, Morton noted: "Today Americans use twice the electrical energy they did 10 years ago ... demands for natural gas have increased faster than we have discovered it, and ... our total oil needs by 1980 will increase by 50 percent."

Reviewing the Administration's efforts to achieve President Nixon's goal of "a sufficient supply of clean energy ... to sustain healthy economic growth and improve the quality of our national life," Morton highlighted research efforts to perfect coal gasification, geothermal steam, fast breeder reactors and solar energy processes.

Secretary Morton called for Americans to "pair the spirit and dynamism of our 'environmental ethic' with an 'energy ethic,'" and proposed that "the first action to stave off energy shortfalls is to reassess all our energy usage patterns -- in short to reorder our energy housekeeping."

The Interior Secretary also reviewed the comparative funding for research and development by privately owned power companies in 1970 -- when, he said, 212 privately owned power companies spent $46 million on research and development and $88.7 million on advertising. "In my view this kind of emphasis is not in the public interest," Morton concluded.

He added that meeting the energy needs of the future "will take the kind of vision and responsibility as well as spirited leadership that the President has shown in his program for clean energy. It's a tough problem but the President has made a good beginning. We must continue to progress."

# # # #

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DEPARTMENT of the INTERIOR

OFFICE OF THE SECRETARY

news release

For Release at time of delivery September 12, 1972

ROGERS C. B. MORTON REMARKS AT THE PRODUCERS COUNCIL ENERGY CONSERVATION SEMINAR, WASHINGTON, D. C., STATLER HILTON, SEPTEMBER 12, 1972, 2:00 P.M.

In my capacity as trustee of the public lands and the Nation's natural, wildlife, and mineral resources, I am frequently named as defendant in suits brought against government environmentalists, by environmentalists amongst our citizens.

As of this morning almost 350 suits are pending, one of which is a tort case alleging improprieties by one of our Park Service bears.

The one suit that I haven't been named in is one from a disgruntled citizen who can't get gas for his car, or fuel for his furnace, or electricity for his lights.

The unfortunate fact, however, is that some Secretary of the Interior in the distant future may have that experience.

For several years ~~we at~~ the Department of the Interior ~~have~~ has been working to inform the Nation of threatening energy shortfalls ... As the President said in his Clean Energy Message, we need to create "A sufficient supply of clean energy ... to sustain healthy economic growth and improve the quality of our national life."

We have also been working to develop more effective uses of our energy, at still economical prices

-- to develop positive programs to utilize our vast, untapped energy assets;

-- to develop an awareness that energy assets are finite;

-- to develop an "energy ethic" if you will.

This is the substance of the President's Clean Energy Message -- the first Presidential message of its kind -- and we are responding.

By no means do I wish to infer that the lights will be out before I finish speaking -- I know they wouldn't dare -- but the potential of an energy crisis is of immense proportion.

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Today Americans use twice the electrical energy they did 10 years ago, and this still is expected to increase 5 times by the year 2000.

Since 1968 our demands for natural gas have increased faster than we have discovered it, and already new priorities in marketing policy have been considered and put into effect.

Our total oil needs will by 1980 increase by 50% and at the current rate of exploration we will have to import one-third of our oil requirements.

Electric power alone required a $4.00 investment to generate $1.00 in sales.

So much for the increase in energy consumption. Let's examine supply projections for the immediate future.

Nuclear power: Plant construction across the Nation has been stalled because of lags in equipment availability, and positive action to ensure that they meet environmental criteria. If we don't perfect the fast breeder reactor we can anticipate a shortage of low-cost uranium supplies by the year 2000.

Coal: Although our greatest fossil fuel resources are coal, much of our coal supplies have been out of the marketplace because they don't meet sulfur oxide emission standards.

Natural gas: As I mentioned, discoveries of new gas have not followed the increase of new demands because of low prices. The low price of gas has stimulated consumption and discouraged exploration. The average wellhead price in constant dollars has declines since 1963. Intrastate gas commands a 25 to 50 percent premium over current yearly average interstate domestic wellhead prices. The FPC is now moving -- despite severe criticism -- to free gas producers from some of these price limitations. This shortage ought to prove one thing to us: "You can't repeal the law of supply and demand."

Oil: Development of domestic petroleum resources has declined and we have become increasingly dependent upon foreign imports. In the last 20 years, geophysical exploration in the U.S. has decreased 72 percent, exploratory wells drilled have decreased 44 percent, and overall drilling activity is down 63 percent. In 1971 about a fourth of our oil demands were filled with foreign imports -- nearly four million barrels a day.

Even with Alaskan oil, we face the prospect of depending upon the politically unstable Mid-Eastern countries for up to a third of our oil supply by 1985.

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The economic implications of this are ominous. A Chase Manhattan report suggeststhat by this time, "the annual balance of payments deficit for petroleum alone could be as much as 25 billion dollars -- a deficit the Nation could not tolerate."

The strategic implications are even more ominous.

This dependence on Mideast oil would force us to compete with our friends and allies in the international marketplace and could weaken their position.

In summary: We are not in the midst of a full-blown energy crisis, despite the occurrence of seasonal "brownouts," but as the margins between supply and demand become narrow, it is difficult to look beyond the immediate future with optimism.

Although I'm too tall for the role, I feel like Alice in Wonderland when she asked the Cheshire Cat if she was headed in the right direction.

He replied simply, "That depends on where you want to go."

It's my belief that President Nixon's Clean Energy Message holds that direction, and that our new directions for clean burning economical energy systems will provide America with continued social and economic progress.

Unlike those who propound Zero Growth, I share the conviction of Henry Wallich, the noted Yale economist. He responded to the controversial Club of Rome MIT Study "Limits of Growth." He said and I quote,

"What the world needs is not to stop growth, but to stimulate and guide it into channels that will permit growth to continue in our life and probably for many generations."

I believe that American can pair the spirit and dynamism of our "Environmental Ethic" with an "Energy Ethic" which is just as relevant to our future.

Just as we have begun to realize that all development doesn't necessarily result in progress, we are also gaining an awareness that our energy resources are finite, and that not all patterns of energy consumption may be necessary.

As a partial reply to the Cheshire Cat, I propose that the first action to stave off energy shortfalls, is to reassess all our energy usage patterns. In short to reorder our energy housekeeping.

The Office of Emergency Preparedness recently issued a report on energy conservation. It suggests that conservation measures can considerably reduce U.S. energy requirements.

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Look at Transportation. In 1970, 25 percent of the total energy in America was used for transportation. Automobiles use 55 percent, with trucks and aircrafts 21 and 7.5 percent respectively.

Through reordering transportation patterns we can effect enormous energy savings through using more energy-efficient systems.

Under the President's leadership a broad spectrum of research and development to design more efficient propulsions and traffic systems has been initiated.

Local and Federal government action to stimulate more efficient less pollutant transportation measures are already having great effect -- but we must further encourage Americans to use transportation which utilizes energy more efficiently.

Let's look at residential and commercial usage. Through more energy-efficient design, and improved insulation we can drastically reduce fuel utilization to heat and cool our living and working spaces.

Good insulation will increase heating and cooling system efficiency by as much as 30 percent. And the cost of meeting new Federal Housing Administration standards to conserve energy in the average home, can be amortized in one year in the average climate.

For the American consumer -- there are few investments that surpass insulation in providing sound returns while contributing to the needs of our national energy ethic.

For the commercial buildings owners it's more than that -- it's simply good business practice.

Energy usage patterns have an incredible effect on our national energy picture.

If, for example, all residential thermostats were set two degrees higher during the summer and two degrees lower during the winter energy savings could be equivalent to one percent of the total oil and gas consumption.

As simplistic as these measures are, they will produce significant returns in halting the possibilities of energy shortages during peak usage periods.

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Although we have not experienced a full-blown energy crisis the experiences of the last months have been invaluable.

I have always subscribed to the belief that crisis heightens the vision, energy, and interest of our people and the energy outlook is no exception.

The Department of the Interior is following the President's lead in promoting energy research and development -- from experiments with geothermal steam, to coal gasification and oil shale development.

Elsewhere we are working with the fast breeder reactor, and solar energy.

Industry is beginning to become more involved in meeting national energy needs with R&D for more effective and cleaner energy sources.

Nevertheless there are great areas that still require new action, and new commitments.

The overall R&D figure for the electrical utility industry represented less than a quarter of 1 percent of gross revenues for 1970 which the President's Office of Science and Technology called, "A remarkably small percentage by most industry standards."

A recent article in HARPERS by Anthony Wolff which discussed this same point noted that in 1970, 212 privately owned power companies spent $46 million on Research and Development. At the same time, $88.7 million was spent directly on advertising -- to stimulate sale of appliances and the use of more energy.

In my view, this kind of emphasis is not in the public interest. In fact, if it continues, it would be downright irresponsible ... and it would reflect narrow self-interest.

Nevertheless, many of the leaders in the power industry are getting behind the need for energy conservation.

One exceptional leader in this area is Charles Luce whose "Save a Watt" program at Con Edison in New York City is already beginning to have an impact.

I believe that our technology, as well as the developing awareness amongst all Americans will lead our Nation into an era of increasing economic and social progress -- with abundant, and clean energy for this growth.

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One thing, however, is that we are no longer in an era or country -- or for that matter a globe -- in which economic and environmental interests can be segregated.

Meeting these needs will take the kind of vision and responsibility as well as spirited leadership that the President has shown in his program for clean energy. It's a tough problem but the President has made a good beginning. We must continue to progress.

# # # #

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TASK FORCE ON ENERGY AND RESOURCES

REPUBLICAN RESEARCH COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

May, 1972

CAMPAIGN FACT SHEET

The Energy Crisis

The news media has told the American public that there exists an "energy crisis."

Typical newspaper headlines have read:

"Facing the Energy Crisis"
"Fuel Crisis, Big Oil Imports Face U.S. by '80s"
"U.S. Energy Crisis: Light Dims at End of the Tunnel"
"Power Crisis, Suits Linked"
"Oil, Foreign Policy, and the Energy Crisis"
"Power Needs by 1990 Seen Quadrupled"
"Energy Crisis is Predicted by Dr. Lapp"
"Action to Avoid Depending on Imported Fuels is Urged"

High-level Administration officials have told the public that our energy situation constitutes a serious national problem. For example:

President Nixon, in his Energy Message to Congress on June 4, 1971, said:

"For most of our history, a plentiful supply of energy is something the American people have taken very much for granted. In the past twenty years alone, we have been able to double our consumption of energy without exhausting the supply. But the assumption that sufficient energy will always be readily available has been brought sharply into question within the last year. The brownouts that have affected some areas of our country, the sharp increases in certain fuel prices and our growing awareness of the environmental consequences of energy production have all demonstrated that we cannot take our energy supply for granted any longer."

Secretary of the Interior Morton, in the Foreward to the Department of the

Interior report, United States Energy - A Summary Review, said:

"Our Nation is facing a difficult and serious energy situation. Supplies of natural gas are not increasing consonant with the demands for that clean fuel. A shortage of electric generating capacity increases the probability of future brownouts in major population areas. The necessary clean air regulations mean higher fuel costs and supply problems for major urban areas. Actions to overcome these problems will require informed public decisions and responsive mechanisms within the Federal Government, so that the benefits of plentiful, clean energy can continue to be enjoyed by the American people."

Secretary of Commerce Peterson, in a speech at the National Press Club on April 4, 1972, said:

"The U.S. formerly had sufficient energy reserves to meet almost all of its needs and sustain economic growth. In fact, this abundant supply of low cost energy has provided the base for much of our industrial might.

"There are a variety of broad options for dealing with this energy crisis."

Secretary of the Treasury Connally, in testimony before the House Committee on Interior and Insular Affairs on April 18, 1972, said:

"There are few material things more important to our Nation and our industrial civilization than energy. Our industry, transportation and the public utilities which light, heat, and cool our homes, hospitals, and schools must have energy generated from oil, gas, coal, nuclear and hydropower, and other sources in order to function.

In spite of this, I am afraid it takes a Northeast brownout or a Suez crisis to waken the public to its reliance on energy. Unfortunately, between emergencies the public tends to take energy for granted, and tends to disregard the compelling need for a strong and effective policy on energy geared to avoid national catastrophe in the future."

Within the Congress, there are several studies of energy and resource problems in progress, including:

1. A national fuels and energy policy study by the Senate Interior and Insular Affairs Committee.

2. A study of the fuel and energy situation by the House Interior and Insular Affairs Committee.

3. A study of the research and development aspects of producing and transmitting energy by the Task Force on Energy of the House Science and Astronautics Committee.

4. A study of energy and resources in the United States relating to a national energy program by the House Republican Task Force on Energy and Resources.

In general, these and other studies are directed at three basic goals:

1. Definition of the "energy crisis," including determination of its extent, causes, and future consequences.

2. Establishment of a national energy policy.

3. Development of a national energy program for accomplishing such a policy, consistent with other national goals.

Primary energy consumption in the United States for 1970 was:

Consuming Sector	Primary Energy Consumption Trillion BTU	Percentage
Residential/Commercial	12,994	19.2
Industrial	17,798	26.2
Transportation	16,282	24.0
Electric Utilities	16,695	24.6
Non-energy and Misc.	4,058	6.0
Total:	67,827	100.0

[Note: Primary energy is produced directly from various fuels and sources, and includes energy required by the electric utilities to produce electricity. Electricity, or electrical energy, is considered a secondary energy source.]

Total energy consumption (primary plus secondary) in the United States for 1970 was:

Consuming Sector	Total Energy Consumption Trillion BTU	Percentage
Residential/Commercial	15,761	23.2
Industrial	20,056	29.6
Transportation	16,313	24.1
Non-energy and Misc.	4,058	6.0
Electricity Conversion	11,639	17.1
Total:	67,827	100.0

[Note 1: The difference between total and primary energy consumption for any specific consuming sector represents the amount of electrical energy consumed. For instance, the industrial sector consumed 17,798 trillion BTU of primary energy plus an additional 2,258 trillion BTU of secondary energy (i.e. electricity) for a total energy consumption of 20,056 trillion BTU.]

Consumption of fuel resources in the United States for 1970 was:

Fuel	Total Consumption	Electric Utility
Coal (Million short tons)	519	322
Natural Gas (Billion cubic feet)	22,412	3,894
Fuel Oil (million barrels)	804	332
*Uranium Ore (short tons)	- -	7,500

*Required feed supply for diffusion plants

Installed electric power capacity in the United States at the end of 1970 was:

Type of Plant	Installed Capacity, at End of 1970 (megawatts)
Fossil Fuel (steam)	260,000
Hydroelectric	55,000
Gas Turbine and Diesel	19,000
Nuclear	6,000
Total	340,000

The possibility of power shortages is expressed in terms of reserve margins. For example, if an utility estimates a summer peak load of 20,000 megawatts (MW) and plans to have 24,000 MW of capacity available, it then has a reserve margin of 4,000 MW, or 20%. This reserve margin is not surplus capacity. It represents a necessary component of generating capacity for covering equipment failures, malfunctions, and essential maintenance. In general, a reserve margin of at least 20% is essential to assure reliable electric service. Reserve margins for the summer of 1972 and the winter of 1972-73 are listed below, by reliability region:

Reliability Region	Reserve Margin (%), as scheduled		Reserved Margin (%), after delays*	
	Summer, 72	Winter, 72-73	Summer, 72	Winter, 72-73
East Central	18.6	16.0	10.1	6.0
Texas	22.8	40.5	9.8	16.1
Mid-Atlantic	20.8	31.5	15.3	25.3
Mid-American (Interpool)	24.4	33.5	4.9	12.2
Mid-Continent	13.3	19.4	7.8	13.1
Northeast	31.5	27.4	24.1	16.5
Southeastern	14.9	21.0	6.3	8.7
Southwest	20.0	49.2	17.5	46.4
Western	30.7	22.7	29.3	19.0

*Reserve margins if scheduled new steam electric generating units are delayed.

[Note: The relationship between reserve margins and power reliability is non-linear. For example, if a 20% reserve margin results in only one occasion in ten years when generating capability might be insufficient to meet load requirements, then a reduction to 10% reserve margin will result in six occasions per year when load curtailment could be expected. In other words, reduction of reserve margin by 50% increases the probability of insufficient capacity by sixty-fold.]

Several specific areas of the United States face the possibility of having reserve margins below 20% for the coming summer, due to delays in new generating plants. Among these areas are New York, Northern Illinois-Wisconsin, Iowa, Virginia-Carolinas, Rocky Mountain, Florida and TVA.

The available supply of electrical energy in the United States for 1971 was:

Source	Production (million kilowatt-hours)
Electric Utility	1,613,936
Industrial	103,585
Total	1,717,521

Sales to ultimate customers for 1971, based on preliminary data, were:

Customer	Sales (million kilowatt-hour)	Percentage of total
Residential	499,147	34
Commercial	328,561	22
Industrial	589,766	40
Other	50,608	4
Total	1,468,082	

Estimated uses of residential electricity, for 1970, were:

	Residential Electricity Sales (billion kilowatt-hours)
Kitchen use	
Refrigeration	84
Cooking	32
Other	23
Cleaning and Grooming	
Water heating	69
Cleaning appliances	31
Lighting	71
Radio & Television	34
Space heating	31
Air conditioning	27
Miscellaneous appliances	46
	448

Projected requirements for electric power capacity are:

Type of Plant	Projected Installed Capacity (megawatts)	
	1980	1990
Fossil Fuel Steam	390,000	558,000
Nuclear	140,000	475,000
Hydroelectric	95,000	152,000
Gas Turbine and Diesel	40,000	75,000
Total	665,000	1,260,000

[Note: The projected capital costs for this new capacity, with associated transmission and distribution facilities, is in the order of $400 billion to $500 billion between 1970 and 1990.]

Projected fuel requirements for electric power generation:

Fuel	1980	1990
Coal (Million short tons)	500	700
Natural gas (billion cubic feet)	3,800	4,200
Fuel oil (million barrels)	640	800
Uranium Ore (short tons)		
without plutonium recycle	41,000	217,000
with plutonium recycle	38,000	108,000

Air pollution resulting from fossil fuel powerplant operations, for 1968, is estimated:

Source	(megawatt hours) Generated (Million)	Sulfur Oxides Amount (Million tons)	Sulfur Oxides Percent of U.S. Total	Nitrogen Oxides Amount (Million tons)	Nitrogen Oxides Percent of U.S. Total	Particulates Amount (Million tons)	Particulates Percent of U.S. Total
Coal-fired.....	685	15.5	46.69	3.0	14.57	5.6	19.79
Oil-fired.....	104	1.3	3.91	0.4	1.94	0.02	0.07
Natural gas.....	304			0.6	2.91		
Total.....	1,093	16.8	50.60	4.0	19.42	5.62	19.86

Water requirements for electric power plant cooling during 1970 are estimated:

Fresh	Saline
111,000 cubic feet per second	46,000 cubic feet per second

In addition, 1,400 cubic feet per second of fresh water was consumed.

Research and development is underway on several advanced sources of electric power, including:

1. Liquid metal cooled fast breeder reactors (LMFBR)
2. Gas cooled fast breeder reactors (GCFBR)
3. Molten salt breeder reactors (MSBR)
4. Light water breeder reactors (LWBR)
5. Magnetohydrodynamic generators (MHD)
6. Electrogasdynamic generators (EGD)
7. Fusion reactors (CTR)

8. Geothermal energy
9. Fuel cells
10. Thermionic generation
11. Thermoelectric generation
12. Solar generation

In addition, some interest has been shown in producing electricity from tidal energy and wind energy, despite past decisions that these sources were not feasible.

At present, three fossil fuels provide 95% of the energy used in the United States:

	U.S. Demand			
Fuel	1970	%	2000 (Estimated)	%
Petroleum (million barrels)	5,367	43	12,000	35
Natural gas (trillion cubic feet)	22	33	46	26
Coal (million short tons)	527	20	1,000	14

[Note: The remaining 4% in 1970 and 25% in 2000 is comprised of energy derived from hydropower, nuclear power, and miscellaneous sources.]

At the beginning of the 21st Century, fossil fuels will account for an estimated 75% of the U.S. total energy demand.

The demand for nuclear energy and other energy sources, such as hydropower and geothermal:

Energy Source	U.S. Energy Demand (trillion BTU)	
	1970	2000
Nuclear power	208	43,528
Hydropower, geothermal, and misc.	2,647	5,056

[Note: Even though U.S. energy demands will continue to be met primarily by fossil fuels, the importance of nuclear power, hydropower, geothermal, and other sources should not be underestimated. The availability or lack of these sources will determine the difference between reliable electric power and blackouts.]

Natural gas consumption in the United States from 1966 to 1970 equalled the annual demand. Additions to gas reserves, however, began declining and in 1968 reserve additions were 8 trillion cubic feet less than annual consumption. The following data show the projected unsatisfied demand for the United States in the coming years:

Year	Annual Demand	Annual Consumption	Unsatisfied Demand
1970	22.6	22.6	0
1971	24.6	23.7	0.9
1972	26.1	24.8	1.3
1973	27.7	25.8	1.9
1975	29.8	26.2	3.6
1980	34.5	25.0	9.5
1990	46.4	29.3	17.1

[Note: All units are in terms of trillion cubic feet.]

The unsatisfied demand illustrates why natural gas rationing has begun in the United States, and why it will continue.*

[Note: *The Supreme Court is presently deciding whether or not the Federal Power Commission has authority to allocate available supplies. In addition, the Commission recently denied an application for new service because the gas would have been used by an electric utility. Several cities and regions in the U.S., including Washington, D. C., have already been told that their gas utilities will not accept any new customers, including new residential consumers.]

The decrease in domestic production of natural gas was, and is, projected to be:

Year	Domestic Production (TcF)	Deficit (Consumption less domestic Production) (TcF)
1971	22.8	0.9
1972	23.8	1.0
1973	24.7	1.1
1975	24.7	1.5
1980	20.4	4.6
1990	17.8	11.5

[Note: This deficit will be met by pipeline imports (from Canada and Mexico), LNG imports (from Algeria and Venezuela, primarily), Alaskan gas, and synthetic gas from coal or liquid hydrocarbons (such as naptha and crude oil). Of these supplemental supplies, LNG will be the largest single source. In other words, despite large-scale rationing of natural gas, the U.S. will still increasingly depend on foreign sources for an appreciable percentage of its supply.]

Price ranges for the additional supplies are estimated below, in terms of dollars per thousand cubic feet (McF).

Source	Price Range
Synthetic gas: coal	0.90 - 1.95
Synthetic gas: oil or naptha	1.00 - 1.70
Pipeline gas: Alaska	1.00 - 1.35
LNG: Algeria (long-term contract)	1.00 - 1.89

[Note: These prices can be compared with the average price received by major interstate pipeline companies for natural gas sold for resale -- about 45¢ per McF. The companies pay domestic producers about 20¢/McF for the gas.]

The consumer will not feel the full impact of these higher priced supplements immediately. The supplemental supplies will be mixed with lower costs domestic gas, thereby increasing the consumer's costs only slightly, compared to the absolute cost.

Petroleum demand in the United States for 1971 averaged 15,367,000 barrels per day or a total of 5.61 billion barrels for the year.

The following data indicate the individual product demand:

Product Demand	1971 (barrels per day)
Gasoline	6,035,000
Kerosine	990,000
Distillate	2,690,000
Residual	2,289,000
All other	3,363,000
Total	15,367,000

New supplies of petroleum averaged 15,466,000 barrels per day for the same year, or a total annual supply of 5.65 billion barrels, of which 1.4 billion barrels was imported:

New Supply	1971 (barrels per day)
Crude oil production	9,536,000
Natural gas liquid production	1,703,000
Crude oil imports	1,669,000
Residual fuel imports	1,542,000
Other products imports	642,000
Net processing gain	374,000
Total	15,466,000

U.S. domestic production is expected to peak by 1975. In fact, the two largest producing states, Texas and Louisiana, are now operating essentially at capacity.

[Note: Effective the first of April this year, the lid was lifted on Texas production, which is now on a 100 percent allowables factor. Production from the Alaskan North Slope, if it becomes available by 1975, will make up some of the decrease in "lower-48" production, but is not expected to keep pace with the increasing demand.]

Total oil demand for the United States is estimated to be:

Year	Demand(billion barrels)
1975	6.6
1985	9.6

Oil imports are projected at 35% of demand by 1975 and over 45% by 1985, assuming that Alaskan North Slope oil is available. Without Alaskan production, imports could exceed 55% by 1985.

[Note 1: Imports will originate from either Canada or the Organization of Petroleum Exporting Countries (OPEC). Limited expansion of import levels from Canada is possible, but are expected to meet only a small percentage of the import demand. OPEC reserves, however, equal over 80% of the free world's total reserves. (OPEC is comprised of Abu Dhabi, Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and Venzuela.)]

[Note 2: It has been estimated that by 1985, United States oil imports will require 367 tankers of the 250,000 dwt class. (At today's prices, that number of tankers would cost about $24 billion.) At present, the U.S. does not have port facilities for handling this size tanker, and construction of such facilities has been opposed in several states and localities.]

[Note 3: Oil imports presently have a significant impact on the U.S. balance-of-trade. In 1971, the U.S. imported over $3.3 billion worth of oil, both crude and products. (Total trade deficit in 1971 was $2 billion.) Estimates for the value of future oil imports are above $6 billion for 1975 and over $15 billion by 1985.]

Production of synthetic crude oil is possible from three sources:

Source	Estimated U.S. Potential (billion barrels)
Oil shale	1,800 (total)
Tar sands	20 (total)
Organic waste	2 (annually)

[Note: Technical problems and high production costs will limit supplies from these three sources.]

Demand for coal in the United States:

Year	Annual Demand (million short tons)	Cumulative Demand 1970-2000 (million short tons)
1970	527	
1975	615	
1985	850	
2000	1,000	22,000

Estimated U.S. coal resources:

Depths less than 1,000 feet (million short tons)	Recoverable under current economic conditions and mining technology (million short tons)
1,600,000	200,000 (min.) - 400,000 (max.)

Coal production techniques:

	U.S. Production (thousand short tons)					
Year	Deep mine	% of total	Strip	% of total	Auger	% of total
1970	338,788	56.2	244,117	40.5	20,027	3.3

[Note: Electric utilities received 331.4 million short tons, or 55% of total production. Electric utilities received about 198 million short ton of surface-mined coal, or approximately 75% of surface-mined production.]

Low-sulphur coal accounts for approximately 70% of the estimated recoverable reserves of strippable coal:

Estimated U.S. Strippable Coal Reserves (billion short tons

Total	Recoverable	Less than 1%	1 - 2% S	Over 2% S
119	45	31.8	4.0	9.2

Removal of sulphur from coal can be partially accomplished before combustion by mechanical cleaning, removing only the pyritic sulphur. Organic sulphur, which comprises about 50% of the total sulphur, can be removed only through expensive chemical processes, such as coal gasification:

Processes for Coal Gasification

Process	Status
Lurgi	Commercially available, but end-product is low-BTU and must be methanated.
HYGAS	Pilot plant constructed near Chicago; process under development by IGI.
CO_2 Acceptor	Pilot plant near completion at Rapid City, S.D.; operated by Consolidation Coal.
BCR Bi-Gas	Contract awarded to Bituminos Coal Research for pilot plant near Homer City, Pa.

[Note: Gasification removes not only sulphur, but also ash, which can comprise as much as 20% of coal.]

Projected demand for coal for commercial gasification in the United States:

Year	Demand (Million short tons)
1980	0
1985	86
1990	213

[Note: By 1990, an estimated 3 trillion cubic feet annually of synthetic gas could be produced from coal. Commercial plants, capable of producing 250 million cubic feet per day, are estimated to cost from $175 - 250 million each. In addition, each plant would require a coal mine capable of producing approximately 6 million tons of coal a year. (If lignite or subbituminous coal is used, the tonnage requirement would increase.) Each plant will also require substantial electrical energy and water supplies.]

Nixon Administration actions to insure an adequate future supply of clear energy, include:

1. Accelerate the liquid metal fast breeder reactor program in partnership with the electric utility industry.

2. Accelerate the coal gasification program, in partnership with the natural gas industry.

3. Expand the sulphur oxide control program and add two new demonstration projects.

4. Accelerate oil and gas leasing on the Outer Continental Shelf.

5. Expedite the oil shale development program.

6. Expedite geothermal leasing.

7. Release funds, $16 million, to start the Cascade Improvement Program at the uranium enrichment plants.

8. Make assessments of new technology, such as solar energy, and establish priorities for future research.

9. Urge enactment of power plant siting legislation.

10. Urge establishment of an energy administration within the proposed Department of Natural Resources.

To conserve energy, the Nixon Administration is:

Issuing new home insulation standards for federally-insured homes.

Developing and publishing information on energy intensive equipment for consumers.

Developing plans for improving energy utilization in transportation systems.

Administration decisions are due soon on such questions as:

1. Permit application for the Trans-Alaskan Pipeline.
2. Increasing oil import quotas.
3. Allowing increased imports of petroleum feedstocks for producing synthetic gas.

The House of Representatives recently passed H.R. 13752, to allow temporary operation of nuclear power plants stalled by environmental lawsuits. The legislation was designed to insure that environmental protection would not be decreased, while at the same time easing the threat of a power shortage. In coming months, the Congress may be considering additional legislation designed to ensure adequate supplies of clean energy, such as:

1. Legislation concerning natural gas reserve data, sanctity of natural gas contracts, and allocation of gas supplies during shortages.
2. Legislation to allow environmentally-acceptable siting of electric power plants and routing of transmission lines, to improve the reliability of electric service, and to meet emergencies during power shortages.
3. Legislation to control strip-mining.

Solutions to the long-range energy crisis will come from new technology, increased exploration and development of domestic energy sources, improved utilization of energy, and more effective organization of the energy policy decision-making process.

Short-range solutions will rely primarily on combined legislative-administrative action designed to make maximum use of available supplies, while at the same time searching for short-term supplements. The lead times for new energy sources range from three years for opening a new coal mine to seven years (or more) to construct a new nuclear power plant.

The energy crisis of today was born during the 1960's. The actions taken today will determine whether or not the crisis will live into the 1980's. In any case, the 1970's will continue to be a period of shortages and unreliable supplies, but the overall impacts can be substantially reduced if the Congress and the Administration will establish the necessary policies and programs which are now lacking.

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TASK FORCE ON ENERGY AND RESOURCES

REPUBLICAN RESEARCH COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

ELECTRIC POWER SHORTAGES

Until 1965, Americans occasionally experienced temporary shortages of electric power, caused by storm damage, accidents involving power lines and poles, or failures of transformers and associated equipment. In November of 1965, the major Northeast blackout publicized the critical nature of reliable electric power, but was itself not caused by a lack of generating capacity, but instead was due to cascading equipment malfunctions. Since that time, however, deficiencies in generating capacity have been the major concern regarding electric power reliability.

For the summer of 1972, the Federal Power Commission has found that the following regions have serious reliability problems:

New York

Estimated peak loads	20,050 MW	
Planned capacity	24,414 MW	
Estimated reserve margin	4,364 MW	21.8%
Without Indian Point No. 2 Nuclear Unit	3,491 MW	17.4%
Without Indian Point No. 2, Northport No. 3, and Bowline Point No. 1 units	2,483 MW	12.3%

Northern Illinois-Wisconsin

Estimated peak loads	18,414 MW	
Planned capacity	20,920 MW	
Estimated reserve margin	2,506 MW	13.6%
Without Quad Cities No. 1 & 2 (at 405 MW combined) and Point Beach nuclear units	1,604 MW	8.7%
Without Quad Cities No. 1 & 2 (at 405 MW combined) Point Beach, and Powerton No. 5 units	764 MW	4.2%

Iowa

Estimated peak loads	3,117 MW	
Planned capacity	3,476 MW	
Estimated reserve margin	359 MW	11.5%
Without Quad Cities No. 1 & 2 (at 404 MW combined) nuclear unit	-45 MW	-1.5%
Without Quad Cities No. 1 & 2 (at 404 MW combined) and Neal No. 2 units	-366 MW	-11.7%

Virginia-Carolinas

Estimated peak loads	20,605 MW	
Planned capacity 1/	23,038 MW	
Estimated reserve margin	2,433 MW	11.8%
Without Oconee No. 1 and Surry No. 1 nuclear units	812 MW	3.9%
Without Oconee No. 1, Surry No. 1, Cliffside No. 5, and Sutton No. 3 units	-178 MW	-0.9%

Florida

Estimated peak loads	11,706 MW	
Planned capacity	13,454 MW	
Estimated reserve margin	1,748 MW	14.9%
Without Turkey Point No. 3 nuclear unit (@ 400 MW)	1,348 MW	11.5%
Without Turkey Point No. 3 (@ 400 MW), Sanford No. 4 and Northside No. 2 units	665 MW	5.7%

1/ Does not reflect elimination of 841 megawatts associated with Oconee No. 1 which has had serious mechanical problems since the above study was made.

(NOTE: A reserve margin of 20% is generally considered minimum for reliable electric service.)

Contingency plans have been prepared by the electric utilities for shortage situations, and filed with the FPC. In general, the nine steps to be taken, in sequence, when blackouts threaten a service area are:

1. When possible, purchase from neighboring utilities sufficient capability to meet the forecast peak load plus an adequate reserve margin to cover forecast error and reasonable contingencies.

2. Operate all generating facilities at maximum ratings.

3. Maximize emergency purchases from interconnected systems to the extent that transmission line loadings permit.

4. Reduce non-essential electric power usage at all utility-owned power plants and office facilities.

5. Discontinue service to contractually interruptible loads.

6. Request voluntary reduction of non-essential loads of large commercial and industrial customers.

7. Reduce voltage up to five percent as required.

8. Make a public request through the news media for all customers to limit electric usage.

9. Manually disconnect selected low priority loads as required. (This selectivity is to facilitate service maintenance to critical loads, e.g. public health and safety.) Rotate load disconnections where the shortage is expected to extend for several hours.

The increased demand for electric power results from:

1. Population increases.
2. Improved standards of living.
3. New and expanded uses for electricity (such as mass transit, pollution control, and industrial processes.)
4. Shifts from other sources of energy to electricity (such as shifts from coal, due to air quality requirements, and from natural gas, due to supply shortages and curtailments.)

Rationing of electric power has been suggested as one possibility. In New York City, Mayor Lindsay has urged the Public Service Commission to restrain Consolidated Edison from supplying electricity for heating buildings, either under construction or planned.
In Pennsylvania, the Chairman of the Public Utilities Commission, George Bloom, has said that the Commission may have to forbid electric utilities to accept new customers, until such time that reliable service can be assured for existing customers.
In Detroit, the Michigan Public Service Commission has been told by a city social planning analyst that rates for large users of electricity should be appreciably increased, thereby possibly limiting usage and demand.

To provide for new power plants, to meet future needs, while at the same time ensuring protection of the environment, the Nixon Administration has urged enactment of power plant siting legislation, now pending before the House Interstate and Foreign Commerce Committee.

Simultaneously, the Federal Government, acting through the Joint Board on Fuel Supply and Fuel Transport, has instituted programs for encouraging energy conservation. One program, described in GSA Bulletin FPMR D-91, calls for reducing electric loads in buildings and facilities operated by Federal agencies. In addition, the Department of Commerce has specifically requested private industries to cooperate with individual electric utilities to develop plans for meeting shortages.

The Office of Consumer Affairs has undertaken an information program to encourage energy conservation by the general public. Two documents, prepared in conjunction with the National Bureau of Standards, have been distributed concerning saving energy in the home.

Energy conservation has become a more frequent theme for utility advertisements. Ads have appeared concerning improved building insulation, efficiency ratings for appliances, and the importance of regular maintenance for consuming equipment.

Electric power demand for typical household appliances has been provided by the Federal Power Commission:

RESIDENTIAL APPLIANCES	AVERAGE WATTAGE
Electric range	12,000
Electric clothes dryer	5,000
Electric hot water heater	4,500
Dishwasher	1,200
Electric frying pan	1,200
Iron	1,000
Toaster	1,000
Waffle iron	1,000
Coffee maker	900
Vacuum cleaner	600
Washing machine	500
Hair dryer	400
TV, black and white	200
TV, color	300
Air conditioners	1,000 - 10,000
Electric carving knife	90
Radio	80
Sewing machine	80
Electric shaver	15
Electric toothbrush	10

In summary, the United States faces an increase in electric power requirements from 340,000 megawatts in 1970 to 665,000 megawatts in 1980, and to 1,260,000 in 1990. R&D is underway to provide clean, reliable sources of electric power, which should start becoming available in commercial quantities during the 1980's. During the 1970's, conservation of energy plus more supplemental sources will be required to prevent electric power shortages. New high-voltage transmission lines, now under construction and being planned, will enable greater exchanges of power between geographic regions, but will require improved coordination between the Federal government, and State and local governments. In addition, all levels of government, together with the electric utility industry, will need to work towards providing the general public with a better understanding of the electric power problem.

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Arlene Knight
Research Assistant

Campaign Fact Sheet

The Natural Gas Shortage

Is there a natural gas shortage?

These headlines represent a sampling of recent newspaper and magazine articles dealing with the natural gas supply:

Gas Company Forbids New Industry Accounts
Worry Over a Key Fuel: Will There Be Enough?
Gas Shortage Poses a Nationwide Threat of Cutbacks
Price of Gas Could Double
Nationwide Gas Crisis Nears
Gas Shortage Causes Housing Crunch
Gas Shortage May Snuff Out D.C. Firm
America Is Running Out of Gas

Government officials, gas industry representatives, scientists and other members of the academic world have recently made statements such as these:

Pinkney Walker, Federal Power Commissioner, said recently, "The natural gas shortage is every bit as serious as it appears and likely to get worse." In another statement Walker said, "Having realized the premium value of natural gas, there are now serious doubts about its availability."

Dr. M.A. Adelman, economics professor at MIT, said, "There is now a serious shortage of natural gas," in testimony before the Senate Committee on Interior and Insular Affairs on February 25, 1972.

In the same hearings, Assistant Secretary Hollis Dole, of the Department of the Interior, said, "perhaps in ten to fifteen years, once again natural gas will be in sufficient supply."

Dr. Ralph Lapp, before the House Committee on Interior and Insular Affairs, said on April 12, 1972, "New additions to reserves will be made, but these have not kept pace with increased consumption. The gas shortages are the result."

George Lawrence, Vice President of the American Gas Association, said, "Let this Committee in its highly important deliberations on the nation's fuels and energy crisis make no mistake about it. The gas shortage is real and serious."

Walter Rogers, President of the Independent Natural Gas Association of America, reports, "...we do not have an endless supply of energy fuels. The greatest impending shortage is in natural gas, and it would appear that every effort should be made to avoid the crisis that must result if remedial action is not promptly taken."

John J. McKetta, Professor of Chemical Engineering at the University of Texas, Austin, has said, "Beginning in 1967 we consistently have discovered less gas than we have produced or used. The discovery line will never again cross the used or produced line throughout the rest of our lives."

John Nassikas, Chairman of the Federal Power Commission, said on April 19, 1972, "In my opinion, it is indisputable, and the evidence so indicates, that deliverable natural gas supplies have deteriorated to intolerable levels. Demand for natural gas has exceeded the most optimistic forecasts and environmental considerations will further accelerate the requirements for this clean-burning fuel. On the other hand, there has been a decline in the exploration and development for natural gas..."

The shortage of natural gas has developed because demand is increasing more rapidly than supply. The significance of natural gas as a primary source of energy, in the U.S., is demonstrated by the fact that in 1970 1/3 of the total energy consumed was supplied by natural gas; 49% of the industrial market, 60% of the commercial market, and 52% of the residential market energy needs were met with natural gas.

Natural gas is attractive because of its low price and minimum environmental impact, a factor that is increasingly important as pollution control laws become more stringent.

The Annual Report of the Council of Economic Advisors released in February, 1972, stated, "Currently a shortage does exist in the natural gas market. Wellhead prices of gas for interstate delivery, which are regulated by the Federal Power Commission (FPC), have not been high enough to induce a supply equal to the growing demand."

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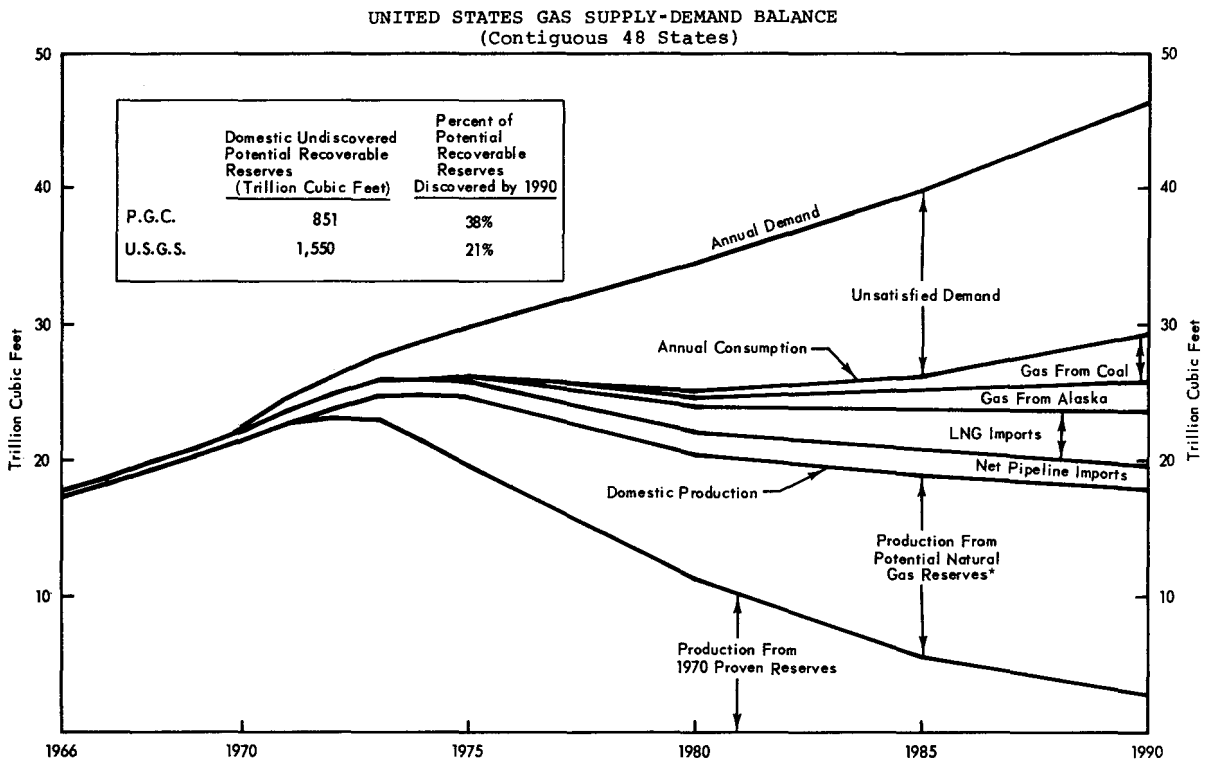
UNITED STATES GAS SUPPLY-DEMAND BALANCE
Actual 1966-1970; Projected 1971-1990
(All Volumes in Trillions of Cubic Feet @ 14.73 Psia and 60° Fahrenheit)

Year	Annual Demand 1/	Net Pipeline Imports	LNG Imports	Gas From Coal	Gas From Alaska	Gas From Liquid Hydrocarbons	Domestic Production	Annual Consumption	Unsatisfied Demand	Reserve Additions	Year-end Reserves	R/P Ratio
1966	17.9	0.4	-	-	-	-	17.5	17.9	0.0	19.2	286.4	16.4
1967	18.8	0.5	-	-	-	-	18.4	18.8	0.0	21.1	289.3	15.8
1968	19.9	0.6	*	-	-	-	19.3	19.9	0.0	12.0	282.1	14.6
1969	21.3	0.7	*	-	-	-	20.6	21.3	0.0	8.3	269.9	13.1
1970	22.6	0.8	*	-	-	-	21.8	22.6	0.0	11.1	259.6	11.9
1971	24.6	0.9	*	-	-	-	22.8	23.7	0.9	12.0	248.8	10.9
1972	26.1	1.0	*	-	-	**	23.8	24.8	1.3	13.0	238.0	10.0
1973	27.7	1.1	*	-	-	**	24.7	25.8	1.9	14.0	227.3	9.2
1974	28.8	1.1	*	-	-	**	24.8	25.9	2.9	15.0	217.4	8.8
1975	29.8	1.2	0.3	-	-	**	24.7	26.2	3.6	16.0	208.7	8.4
1980	34.5	1.6	2.0	0.3	0.7	**	20.4	25.0	9.5	17.0	186.1	9.1
1985	39.8	1.9	3.0	1.4	1.3	**	18.5	26.1	13.7	17.0	175.4	9.5
1990	46.4	1.9	4.0	3.3	2.3	**	17.8	29.3	17.1	17.0	170.4	9.6
1971-1990 Totals	707.6	31.1	38.0	17.3	20.6	**	414.2	521.2	186.4	325.0	-	-

* Very small volumes
** Insufficient data for quantitative projection: unsatisfied demand will be reduced by the amount of SNG actually produced.
1/ Contiguous 48 states.



*U.S. Natural Gas Reserve Additions (1971-1990) Total 325 Trillion Cubic Feet.

Effects of the gas shortage can be seen in a variety of ways across the nation. Industry has already been affected in areas where utilities are rationing gas to industrial and commercial customers with "interruptible" contracts. Such contracts allow cutbacks in service when gas is needed to maintain service to higher priority customers, such as homes and hospitals. Another way industry is being affected is by refusal of utilities to set up new contracts. Some residential areas are also being affected.

Weather is a major factor in determining how serious the effects of the gas shortage will be in the immediate future. Two mild winters have already decreased the extent of gas shortages. An unusually hot summer, with heavy energy demands due to air conditioning needs, or a very cold winter with high heating demands, could necessitate more severe cutbacks or shut-offs.

A February survey by the National Association of Regulatory Utility Commissioners revealed that curtailments or priority schedules are already a reality in many states:

Alabama - has an approved plan for natural gas conservation.

Arizona - Some companies have curtailed or stopped service to large industrial users with interruptible clauses during severe shortages. Several utilities have built up oil reserves for emergency use.

Arkansas - The State Public Service Commission has close control over the actions of Arkansas Louisiana Gas Company (Arkla). The PSC has called Arkla's gas supply inadequate and ordered the company to set up a schedule of curtailment procedures.

California - has had a system of curtailments during shortages since the 1940's and has a plan which allows firm non-residential service only where residential service is assured or where a substitute can be used. Pacific Lighting Corporation, located in southern California, has predicted that it will be able to supply only 46% of the needs of its interruptible users in 1974.

Colorado - There has been a tightening of interruptible service.

Connecticut - The Public Utilities Commission has instructed all companies to examine their contracts and supplies. Connecticut Power and Light Company has been allowed, since early 1971, to reject all new customers or added loads from old customers because of the supply shortage. A system of priorities has been set up by the Company, in response to orders from the Commission, which allows maximum volumes of 500,000 BTU per hour for residential and 2,000,000 BTU per hour for industrial customers.

Delaware - The Public Service Commission has curtailed natural gas distribution in the state. It has also ordered Delmarva Power and Light to supply new users only if the company can guarantee existing users. Delmarva is not allowed to supply any homes switching to gas heating and is to discourage new gas appliances. Advertising is only permitted for replacement appliances or those which would be used during low-usage periods.

D.C. The Public Service Commission has called for an investigation and public hearings on the gas shortage. Only in the case of priority or extreme hardship cases has service been added since February. Washington Gas Light, serving the District and portions of Maryland and Virginia is taking no new customers, residential or otherwise.

Florida - Two of Florida's three gas suppliers have curtailed gas for certain periods due to the shortage.

Georgia - Utilities have been informed that no additional gas will be available from suppliers.

Idaho - The Public Utilities Commission continually monitors the supply which is not yet at the critical point. An end-use policy is currently being developed by the Public Utilities Commission.

Illinois - The Commerce Commission and gas distributors have set up a plan which includes rationing according to priorities, provision of alternate fuel supplies, and interruptible service contracts based on weather conditions. Central Illinois Light Company, Central Illinois Power Service, Illinois Power Company, and Peoples Gas Light and Coke are curtailing installations to new industrial and commercial customers. Peoples Gas of Chicago has had waiting lists since June of 1970 of prospective commercial and industrial users who have already filed applications. Illinois Gas is making no new connections to industry.

Indiana - The State Public Service Commission allows each utility to set up its own rules for curtailment. Two firms, Indiana Gas Company, Inc., and Indiana Utilities have restrictions on new commercial and industrial installation.

Iowa - Iowa utilities are limiting new sales to industry and commercial users and closely watching all commitments, including those to residential users.

Kansas - Curtailments have recently been extended from cold weather to other seasons.

Kentucky - Senator Cook said on March 2 that "in many instances small and large industry is being denied expansion because of the lack of an adequate gas supply."

Louisiana - The Texas Gulf Sulphur Company has said it may be forced to close down its Louisiana sulphur mine unless it is able to get more gas.

Maine - has adequate present and future supplies.

Maryland - Washington Gas Light Company has been ordered to restrict new gas sales sharply because its supplier has only enough gas to meet current contracts. The Company announced in March that it will not provide any new gas tie-ins to builders or consumers. Columbia Gas has instituted a freeze on sales of interruptible gas and accepts no new loads over 2000 cubic feet per hour per customer. Columbia Gas Transmission Corporation has notified customers that they will not receive additional gas beyond that needed for residential use after Oct. 31, 1972. On the Eastern Shore and in the Cambridge area, applications are accepted only for residential or domestic use, or commercial customers using less than 2000 cubic feet per day. Utilities are refusing new service to apartment houses and single family developments in addition to commercial and industrial users.

Massachusetts - The Department of Public Utilities is currently reviewing the supply of each company in order to determine if any curtailments are necessary.

Michigan - The Public Service Commission has recently ordered restrictions, even on residential sales, and has set up priorities for service. New residential, commercial, and industrial customers have been forbidden in the Southern Division of the Michigan Gas Utilities Company and new commercial and industrial customers over 12,000,000 cubic feet per year are forbidden in the Western Division. Consumers Power of Jackson has a long waiting list of small commercial and industrial applicants. Battle Creek Utility, which along with Michigan Consolidated is restricted in accepting new commercial and industrial customers, has a waiting list of 700 applicants.

Minnesota - Montana-Dakota Utilities is restricting new commercial and industrial users.

Mississippi - Several major gas companies have included curtailment plans in their tariff rate schedules for 1971.

Missouri - The Public Service Commission has approved priorities for curtailment set up by individual companies. Missouri Public Service Company discontinues accepting applications during periods of shortage and accepts them in order of priorities when the shortage eases. Missouri Power and Light has placed restrictions on new commercial and industrial installations.

Montana - No gas shortage is foreseen.

Nevada - The Public Service Commission has set up priorities in the event of a gas shortage.

New Hampshire - The primary supplier for the state is Tennessee Gas Pipeline Company which has notified the N.H. customers that no increases in contracts can be given. Utilities are accepting only new business which can be filled in line with priorities established by the P.U.C.

New Jersey - The Department of Public Utilities has issued an order to establish procedures to insure maintenance of service to residential users and "essential community services and installations," when curtailment is necessary. The Board has also ordered utilities to prepare in advance and file with the news media a series of public appeals to all customers for voluntary reduction in gas use and suggestions for conserving gas used for heating and for cooking and drying clothes; these appeals will be used immediately when curtailment is necessary. Each utility must submit its plans and policies for new customers. New Jersey Natural Gas has placed restrictions on new commercial and industrial users.

New Mexico - El Paso Gas, in response to a New Mexico community group seeking new industry, said it was not interested in new users, which curbs hope of industry for the town.

New York - The Public Service Commission has a policy on curtailments, and currently restricts all new customers except residential. Industrial and commercial customers are required to have dual fuel facilities. Niagara-Mohawk, New York Electric and Gas, and Orange and Rockland have restrictions on all new installations. Consolidated Edison of New York accepts only certain residential customers. Last winter, Brooklyn Union Gas Company cut off its service to

interruptible customers in November because of shortages during the winter season. The staff of the New York Department of Public Service, in its 1971 report on gas supplies, recommended that the Federal government take control of available fuel supplies, including natural gas. Among their conclusions and recommendations were:

The demand for gas be regulated by end-use controls.
Domestic supplies of natural gas be directed to high-priority firm markets.
All fuels, including natural gas, be directed to their most efficient uses.

The report stated that it "is impossible for any single state to effectively control energy sources and uses which affect that state."

North Carolina - The State Utilities Commission in 1970 set up procedures for limiting service after the state's largest supplier (Transco) stated it could not meet all the needs of its customers.

Ohio - Columbia Gas of Ohio and the Ohio Valley Gas Company in October, 1971, announced that they would not accept new industrial loads or large new commercial loads. This action was taken in addition to the April 1970 freeze on industrial and commercial customers. East Ohio Gas is accepting no new customers. Permission for Columbia Gas and Ohio Valley Gas to refuse service to new residential customers was granted on June 23, 1972, by the Public Utilities Commission. The companies made the request when they learned that they can expect no increase in supplies over last winter's supply. This means that they will not be able to meet even the normal 2% increase of their approximately 400,000 residential customers. Ohio home-builders responded by saying that such a freeze means new homes will be higher priced since an all-electric home costs 10% more to build than a gas home. Concern was also expressed as to whether the electric company could fill the increased needs.

Oklahoma - The Oklahoma Corporation Commission regulates gas production and public utilities. Lone Star Gas was denied permission to sell gas to a new Weyerhaeuser plant at Valiant, Oklahoma.

Pennsylvania - The Public Utility Commission conducted extensive investigation of the natural gas shortage and concluded that none of the possible solutions would have any effect on the shortage for at least 5 years. As a result, all gas utilities must file detailed reports of many phases of operation, reasons for changes greater than 5%, and procedures for curtailment. In addition, all advertising and promotional activities were halted and new customers limited. The Pittsburgh area is already feeling a housing pinch due to the shortage. The P.U.C. has ordered gas companies to take on new residential customers only if it can guarantee satisfactory service to all old and new consumers during the next five years, a provision which some of the gas companies are unable to meet. As a result, builders are forced to turn to electricity, which puts some new homes out of the reach of people seeking FHA help. Columbia Gas of Pennsylvania has announced an indefinite ban on all new sales; Columbia serves 22 Western Pennsylvania counties. UGI of Philadelphia discourages new industries.

South Carolina - Several S.C. utilities have set up voluntary curtailment programs including restriction of new sales and denial of service of firm gas to new commercial and industrial users. The Emergency Load Shedding Plan of Carolina Pipeline Company was developed for use in a shortage - it would first be voluntary and then, if necessary, become mandatory. In the Plan, all interruptible service

is first curtailed, then all industrial customers are asked to cut back to minimum usage; churches, schools, and public buildings are asked to reduce thermostat settings as far as possible, and church services and school sessions may be curtailed; commercial customers are asked to curtail operations; and, finally, the general public is asked through the news media to curtail gas usage as much as possible.

Tennessee - Three companies have voluntarily set up priorities for curtailment and service limitation in case of a gas shortage. Nashville Gas Company has put into effect a revised natural gas tariff giving emergency curtailment procedures because the company's supplies have been curtailed.

Texas - The Railroad Commission says that FPC price levels must be raised to encourage new exploration and relieve the gas shortage. Monsanto Company and the Texas Gulf Sulphur Company sued United Gas Pipeline Company for failing to deliver promised gas supplies which it did not have. The FPC in June refused to allow Lone Star Gas Company of Dallas to change its pipeline system to sell gas to a new industrial plant.

Utah - The state has adequate natural gas reserves for about fifteen years.

Vermont - No curtailment is anticipated.

Virginia - The State Corporation Commission has powers allowing almost instant curtailment of gas usage in event of a shortage. For example, two years ago a large industry was ordered to cut its use from 38,000 cubic feet to 19,000 cubic feet per day because of a sharp temperature drop causing heightened needs of other consumers; the industry complied in less than half an hour. The Commission has granted all requests by companies to curtail new usage. Columbia Gas of Virginia has been ordered to refuse gas service to any new customers, including residential, by the Commission. Columbia was the first gas company in the state to limit residential service, but 12 of the 14 companies serving the state have been restricted in some way.

Washington - A meeting is scheduled soon of the Pacific Northwest's regulatory agencies, gas distributors, and suppliers to attempt to solve the gas supply problem.

West Virginia - The Public Service Commission is considering requests by gas companies to refuse to accept new industrial and commercial customers. Columbia Gas of W. Va. currently accepts none.

Wisconsin - The Public Service Commission is handling the gas shortage separately with each company. A number of companies have filed requests to limit sales to new customers or added gas to old customers. Wisconsin Fuel and Light currently accepts no new customers.

Wyoming - No shortage is foreseen, but in the event of one, the legislature might attempt to curtail exports of natural gas.

Actions to increase natural gas supplies include:

1. Legislation (pending) to guarantee contract agreements concerning natural gas prices (i.e. the "Sanctity of Contract" bills, H.R. 2513 and S. 2467).

2. Regulatory policies to increase the wellhead price of interstate gas, thereby increasing the economically recoverable reserve base.

3. Research and Development for increasing production of natural gas, such as the Plowshare Program which uses nuclear detonations to fracture tight formations and stimulate gas flows.

4. Research and Development for providing supplemental sources of gas, such as producing synthetic gas from coal.

5. Acceleration of lease programs for Federal lands on the Outer Continental Shelf, to increase exploratory drilling and production of both oil and natural gas.

In addition, improvements in building insulation standards can conserve natural gas used for space heating. And, as new research and development programs for removing sulphur dioxides and other pollutants from coal-burning systems become operational, the demand for natural gas to meet air pollution standards can be reduced.

But, the demand for natural gas in new areas, such as automobile engines and fuel cells, will increase.

The United States faces both a short-term gas shortage, resulting in varying degrees of government control at all levels, and a long-term shortage, which can be partially alleviated by new policies and programs.

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TASK FORCE ON ENERGY AND RESOURCES

REPUBLICAN RESEARCH COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

August, 1972

CAMPAIGN FACT SHEET

THE TRANS-ALASKA PIPELINE

Secretary of the Interior Morton announced on May 11, 1972, that he had decided to grant right-of-way permits for the proposed Trans-Alaska Pipeline.

[Note: Because of injunctions issued in pending litigation, actual permits could not be granted. The court order requires that notice of the Secretary's intent to grant the permits be given to the plaintiffs.]

The Final Environmental Impact Statement on the application for a right-of-way was made public by the Interior Department on March 20, 1972. It consisted of six volumes and three supplemental volumes, totaling over 3,800 pages, and was the result of approximately 175 man-years of work. It can be described as "the most thorough and lengthy impact statement ever published."

[Note: A draft statement was made public on January 15, 1971. It was the subject of eight days of public hearings, during which time oral testimony was taken from 297 individuals. The transcript of the hearings comprises ten volumes totalling 2,118 pages, accompanied by 15 volumes of exhibits totalling 4,317 pages. Supplemental testimony submitted comprises 12 volumes totalling 3,639 pages.]

Secretary Morton said, in his announcement on March 11, 1972:

> "I am convinced that it is our best national interest to avoid all further delays and uncertainties in planning the development of Alaska North Slope oil reserves by having a secure pipeline located under the total jurisdiction and for the exclusive use of the United States."

In his conclusion, he stated:

> "Recognizing the need to protect the Alaskan environment, we have developed the strictest environmental regulations to control design and construction of the biggest non-Government project in history. These regulations will be strictly enforced."

Environmental concerns associated with the pipeline include:

1. Possible onshore oil spills, resulting from earthquakes, permafrost instability, landslides, sabotage, etc.
2. Possible offshore oil spills, resulting from tanker operations between Port Valdez and terminals on the West Coast and elsewhere.
3. Disruption of wildlife migration patterns and habitats.

The primary alternative to the Trans-Alaska pipeline is to construct a pipeline through Canada, eliminating the need for tanker shipments. Opposition by the Department of Interior to this alternative is based on:

1. Additional delays of 3 to 5 years for oil deliveries to the Continental U.S.
2. Additional costs (about $6 billion for a Canadian route compared to about $2.8 billion for the Alaskan route plus $1.7 billion for tankers).
3. Increased environmental impacts, resulting from the increased pipeline length (about 3,000 miles via Canada's MacKenzie River Valley).
4. Lack of total U.S. control over the pipeline, including a probable necessity for sharing the pipeline capacity.

Background of the pipeline is:

January, 1968 - Atlantic Richfield and Humble Oil discover oil at Prudhoe Bay.
February, 1968 - ARCO, Humble, and BP announce plans for a 48-inch pipeline to Valdez.
April, 1969 - $100 million worth of 48-inch pipe ordered from Japan (delivery completed in October, 1971).
August - September, 1969 - Department of the Interior holds public hearings in Alaska concerning environmental protection.
September, 1969 - Alaska sells to oil companies North Slope leases worth $900 million.
December, 1969 - Congress passes the National Environmental Policy Act.
March, 1970 - Department of the Interior sued by environmental groups.
April, 1970 - Federal Court enjoins Interior from issuing pipeline permit.
August, 1970 - Alyeska Pipeline Service Co. formed to design, construct and operate the pipeline.

[Note: Alyeska's application is for a 48-inch oil pipeline right-of-way across Federal lands in Alaska between Prudhoe Bay on the North Slope to Valdez on the South Coast. The total pipeline would be about 789 miles long, with about 641 miles traversing Federal lands.]

The pipeline is to be owned by:

Company	Percentage
BP	28%
Atlantic Richfield	28%
Humble Oil	26%
Mobil Oil	9%
Phillips Petroleum	3%
Union Oil	3%
Amerada Hess	3%

North Slope oil reserves are presently estimated at 10 billion barrels. (U.S. "lower-48" reserves are 28 billion barrels. Production in 1971 was 3 1/2 billion barrels.)

North Slope natural gas reserves are presently estimated at 26 trillion cubic feet. (U.S. "lower-48" reserves are 253 trillion cubic feet. Production in 1971 was 22 trillion cubic feet.)

Production from the North Slope could begin by 1976 and could ultimately reach 2 million barrels per day -- approximately 10% of future demand.

Oil tanker traffic between Port Valdez and U.S. ports is to be in domestic ships, due to the requirements of the Jones Act. Full production of 2 million barrels per day would require about 41 tankers, with a projected 33 to be built in U.S. shipyards.

Approval of the pipeline is predicated on the following:

1. The pipeline is to be designed to survive "contingency-plan" earthquakes, and to continue to operate during "operating" earthquakes. ("Contingency-plan" quakes equal or exceed any ever recorded within 100 miles of the pipeline route, and are expected to occur once every 200 years. "Operating" quakes are half as powerful.)

2. Soil conditions and stability are to be determined through analysis of over 15,000 soil samples, with approximately 2,500 core holes being drilled along the route.

3. Permafrost instability is to be avoided either by aboveground berm and pile-bent construction (following a zigzag pattern to allow for thermal contraction or expansion) or special buried construction to prevent thawing of permafrost.

4. Disruption of wildlife migration patterns is to be avoided, using gradual underpasses or crossing ramps where necessary.

5. Check valves and gate-type block valves are to be installed at close intervals to isolate sections of the pipeline in case of a leak, and for testing and maintenance, especially on both sides of the Yukon River and on both sides of the Denali Fault (in the Alaska Range). Pipeline conditions are to be constantly monitored to detect any possible leaks.

Production of natural gas, an environmentally desirable clean fuel, from the Prudhoe Bay Field is to be sent by pipeline through Canada to the Midwest. The natural gas cannot be produced or shipped until after the oil pipeline is completed. Any delay in the oil pipeline will delay the gas pipeline by approximately the same length of time.

West Coast oil requirements are presently projected to exceed domestic supply through the 1970's and 1980's. If the West Coast does not receive Prudhoe Bay oil on schedule, then tanker import levels, primarily from Indonesia and the Persian Gulf, would have to be increased to satisfy demand. Since the remainder of the U.S. will also be required to increase oil tanker import levels during this period, the only forseeable alternatives to increasing West Coast tanker imports are increased offshore drilling or rationing.

Price increases for imported oil, instituted by the Organization of Petroleum Exporting Countries, might force the price of crude petroleum up to $5.00 per barrel,

however. At this price range, production of shale oil could become commercially feasible, but production levels are unknown at this time.

In summary, the decision of the Secretary of the Interior to approve permits for the Trans-Alaska pipeline is based on:

1. The Trans-Alaska route offers the least environmental impact of the feasible alternatives. In addition, it will provide natural gas, needed to meet air quality standards, earlier than the alternatives.

2. The need for oil and natural gas in the "lower-48" requires Prudhoe Bay production in order to prevent increased oil imports (affecting both national security and the balance-of-payments) or scarcity, with the resulting possibility of rationing and unacceptable price increases.

On August 15, 1972, U.S. District Judge George L. Hart, Jr. lifted the injunction which has blocked construction of the pipeline since April, 1970. Judge Hart ruled that Secretary Morton had complied with the National Environmental Policy Act. However, the environmental groups who had obtained the injunction (on grounds that the Secretary of the Interior had violated the law by failing to prepare an environmental impact statement as required by NEPA) have served notice of appeal in the U.S. Court of Appeals for the District of Columbia. (The State of Alaska may ask the Supreme Court to take the case directly, bypassing the Court of Appeals). Alyeska Pipeline Service Company has stated that no pipe will be laid before the Appeals Court rules.

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TASK FORCE ON ENERGY AND RESOURCES

REPUBLICAN RESEARCH COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

September, 1972

Campaign Fact Sheet

OPEC

The Organization of Petroleum Exporting Countries (OPEC) is the common denominator for several controversial issues involving U.S. Government policy as regards supplies of petroleum and petroleum products. Among these political issues are:

1. The Trans-Alaska pipeline
2. Offshore leasing and drilling
3. Super-tanker port construction
4. Oil refinery construction and operation
5. Oil shale leasing and development
6. Consumer price increases
7. U.S./Israel relations
8. Rationing and end-use controls

Present projections for U.S. oil supply and demand indicate that by 1985 the U.S. could be dependent on OPEC-controlled supplies for over 40% of its requirements. (this estimate assumes available Alaskan North Slope production of two million barrels per day.)

[Note: Imports of natural gas and SYNGAS feedstocks from OPEC are projected to also rise. This subject will be presented in a separate fact sheet.)

The nature of OPEC is, therefore, a necessary consideration for future U.S. energy policy decisions. Specifically, the options available with regard to the issues listed above will vary considerably based on different estimates of future reliability of the OPEC countries as a primary source of U.S. oil imports.

The eleven nations that make up the Organization of Petroleum Exporting Countries (Abu Dhabi, Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and Venezuela) contain 80 to 85 percent of the known petroleum reserves in the world. OPEC was organized in 1960, primarily in opposition to posted price reductions instituted by the major oil companies in the face of weak market conditions. Since 1969, the Organization has become increasingly prominent in negotiations with the oil companies on several issues, including participation of the host countries in the share of ownership of foreign-owned oil companies.

John Connally, then Secretary of the Treasury, speaking before the House Committee on Interior and Insular Affairs on April 18, said, "The international oil situation is currently in ferment. The countries comprising the Organization of Petroleum Exporting Countries have strengthened their cartel to the extent that they are confronting the international oil companies and the consuming countries in a manner unparalleled in recent economic history."

OPEC countries share of profits from oil concessions is estimated to average over 70 percent of total profits.

Present goals of OPEC include 20 to 51 percent equity participation in operating companies plus a share in downstream operations (refining, transporting, and marketing in the consuming countries).

Abu Dhabi is the leading state of the Federation of Arab Emirates and a major oil producer of the Persian Gulf region. In 1971, Abu Dhabi produced 950 thousand barrels per day. Reserves are estimated to be 19 billion barrels.

Kuwait, holding 12 percent of the total free world's oil reserves, or 66 billion barrels, has recently placed limitations on daily output of crude oil in order to protect her reserves. In 1971, Kuwait produced nearly 3.2 million barrels per day.

Qatar produced 450 thousand barrels per day in 1971. Reserves are 6 billion barrels.

Iran plays a major role in the Gulf. She has the strongest military role as well as being one of the world's top oil exporters. Iran is sometimes out of step with the Arab nations in the region because of political differences. Iran's production figures are 4.5 million barrels per day for 1971 and reserves are 56 billion barrels.

On June 1, 1972, Iraq nationalized the Western-owned Iraq Petroleum Company, citing as the reason the cut-back in oil production and the accompanying drop in revenue for Iraq which occurred when prices of the oil became non-competitive because of Iraq's revenue demands. The action also was apparently encouraged by a recent treaty with the Soviet Union which includes the purchase of Iraq oil. On June 13, Baghdad Radio reported that the Soviet Union and Iraq were studying the establishment of a joint tanker and maritime transport company. In order to financially support Iraq until more markets are found, several member countries of the Organization of Arab Petroleum Exporting Countries agreed to loan the country 135 million dollars. Iraq has the full backing of the OPEC members, according to the Baghdad Observer. Iraq has reserves of 36 billion barrels and 1971 production was slightly over 1.7 million barrels per day.

Saudi Arabia, which now ranks as the world's top oil exporter, seeks 20 percent increasing to 51 percent participation. In 1971, 4.8 million barrels per day were produced and the published reserves are 145 billion barrels.

In Algeria, all non-French and 51 percent of French operations have been nationalized. The government owns 77 percent of the oil output and 100 percent of gas production and pipelines. About 720 thousand barrels per day were produced in 1971 and reserves amount to 12 billion barrels.

In December of 1971, Libya nationalized the holdings of British Petroleum Company because of what was termed "British conspiracy" in the Iranian take-over of three islands in the

Strait of Hormuz in November of 1971. The nationalization has produced problems for Libya, since she lacks the personnel necessary to run the operation and is also having trouble marketing the oil. The Eastern bloc countries are pruchasing oil and the USSR has signed an agreement to provide technical assistance for exploration and production. 1971 production amounted to 2.75 million barrels per day and published reserves stand at 25 billion barrels.

Nigeria holds 51 percent of the operations of new non-producing concessions and is possibly planning to seek 33 percent in old concessions. 1.5 million barrels per day were produced in 1971 and reserves are estimated at 11.7 billion barrels.

Indonesia produced 850 thousand barrels per day in 1971 and has reserves of 10 billion barrels. The state-owned oil company has an oil monopoly, although exploration and exploitation contracts are granted to outside firms on a production-sharing basis.

Venezuela, the largest and one of the most dependable of OPEC oil suppliers, may be posing some new problems. During 1971, the government raised oil-industry taxes and nationalized natural gas. Currently, the Venezuelan congress is considering legislation under which the state oil company would take over all marketing of petroleum products. Venezuelan oil production in 1971 averaged about 3.5 million barrels a day and reserves are estimated to be 14 billion barrels.

The extent of U.S. dependence on oil from OPEC nations was pointed out recently by James Akins, Director of the Office of Fuels and Energy of the Department of State, who said that by 1980 Libya, Saudi Arabia, Kuwait, Iraq and, possibly, Abu Dhabi will be producing more than the spare capacity of a combination of all other producing nations. "Any one of those countries could cause a supply crisis by cutting off its production and any two could cause a serious one. Unfortunately, we may already be at that point."

The same idea has been expressed by Lord Strathalmond, Managing Director of British Petroleum Company, who noted that the only source large enough to meet the needs of the importing countries (U.S., Western Europe, and Japan) during the next decade will be the Middle East and Africa.

Hollis Dole, Assistant Secretary of the Interior for Mineral Resources, said on June 12 that the U.S. may have to import 15 to 17 million barrels per day by 1985, with as much as 11 million barrels coming from the Middle East.

Under Secretary of State John Irwin II, in Hearings before the House Committee on Interior and Insular Affairs, said, "As the East Coast of the U.S. is now dependent on imports to supply 95 percent of its residual fuel requirements, we are tied to a large extent to the policies -- economic, trade, political -- of the countries which control refinery production for the U.S. market . . . we should be aware of this dependence in reviewing the course fo future policies."

In the same hearings on April 11, Barry Shillito, Assistant Secretary of Defense, said, "Supply must not be hostage to the whims of others if our security is to be assured."

According to Walter Levy, oil economist and consultant, the biggest concern is "oil availability - on acceptable commercial terms, strategically secure and not subject to political blackmail." There are examples when reliability of supply has been a problem. One such instance occurred in 1970 when Libya cut-back her oil output which, coupled with a break in the Trans-Arabian pipeline and the closed Suez Canal, created a situation which caused the oil companies to meet the financial demands of the OPEC members.

Another significant factor to be considered is the Arab reaction to the U.S. - Israel relationship. In January, 1972, the Cairo newspaper, Al-Ahram, urged the Arab states to impose additional taxes on U.S. oil firms and to give no more concessions to American firms because of the decision of the U.S. to resume delivery of Phantom fighter-bombers to Israel. Also in January, an Egyptian oil expert drew up a plan for "unified Arab strategy for action against United States oil interests in the Middle East." Another example occurred after the 1967 war, when Arab nations embargoed oil shipments for a time to the United States, Britain and West Germany.

Libyan Prime Minister Quaddafi attacked Britain and the U.S. in June, 1972, in these words: "The sacred message of all faithful Moslems and patriotic Arabs today is to fight Britain and the United States and if the two powers choose to fight us here in the Middle East, then we will fight them on their own lands. I swear if by the end of this year, 1972, the wrongs and perfidy are not corrected and erased, then I will escalate the struggle against Britain and the United States. I will fight them with all the power we have and can have, on their own lands."

George Lincoln, Director of the Office of Emergency Preparedness, said on April 11, "The world oil scene, as well as the U.S. energy scene, has experienced a revolution in the last three years . . . We'd better recognize this revolution now."

James Akins, before the House Subcommittee on the Near East, said on July 15, 1971, "An awful lot of reputations have been lost by people predicting the Arabs would never take any action that wasn't in their short-term economic interest. The Arabs do that sort of thing; I shall add that not only Arabs but a lot of other people in the world sometimes do the same.

"Take the case of Iran. When the Iranians nationalized production, oil production was closed down completely. Iran was the biggest producer in the Middle East at the time. And was down for three years.

"I am not saying the Arabs would cut off all production for three years. I think, however, that they might cut off oil deliveries in order to try to achieve some political aim; and if they were to do this, there would be no way this oil could be made up elsewhere . . .

"In another situation, when possibly the United States would be more involved or if there were to be a new outbreak of hostilities, even without U.S. involvement, I don't think we can say it would be out of the question for Arabs to cut off oil deliveries again. This is a possibility we always have to reckon with.

"If we thought the oil were always going to flow, then we could relax. It is the danger of the oil being cut off and the fact that there is no way this oil can be made up outside of the Arab world that makes the situation dangerous."

[Note: Mr. Akins attended the Eighth Arab Petroleum Congress, held in Algiers from May 28 to June 3, 1972. He reports that, for the first time at an important Arab conference, there was "widespread recognition that Arab oil is finite, that it is already possible to see it peaking out and declining, that it is not in the Arab's interests to allow the companies to continue expansion of production at will, and that the producing countries, most notably Saudi Arabia, must follow Libya's and Kuwait's leads in imposing production limitations." Mr. Akins predicts at least a doubling in the current price of Persian Gulf oil.]

OPEC's support for the Iraqi nationalization of the Iraq Petroleum Company assets was expressed at a special meeting in Beirut on June 9, 1972. At that meeting, a resolution was passed calling for production ceilings in OPEC-member states to prevent replacement of the nationalized Iraqi crude in world oil markets.

PRODUCERS' COUNCIL, INC.

The
National
Association
of
Quality
Building
Products
Manufacturers

The Producers' Council, Inc.

Established in 1921, the Producers' Council has served the construction industry for over 50 years. It is an organization recognized for integrity and quality of product of its member companies. This reputation has earned the Council a unique position within the architectural profession—a position of mutual trust and interdependency—which is now being extended to all members of the building team.

As the construction industry changes, so does the Council. For it is only through change, and recognition that changes are occurring, that progress is made and the needs of the membership are satisfied.

The Producers' Council is unique, both in structure and membership. It is the *only* association dedicated to programs and service for the *entire* building products field—and with a membership consisting of a wide cross section of quality building products manufacturers.

What it does . . .

• Provides a channel of communication with, and service to design professionals and other key individuals in the construction industry who influence the selection of building products. Fifty-three local chapters present product oriented *programs* attracting annually 60,000 concerned specifiers and users of products.

• Maintains effective programs and conferences to determine trends in industry and government and changes in the market place.

• Gives the product manufacturer a means by which he can extend his services, knowledge and experience effectively and economically to the public.

Who belongs . . .

• Council membership consists of over 120 national building products companies and 80 subsidiaries, representing the largest cross section of quality product selection of any association in the construction industry.

• Over 4,000 chapter members in all major marketing centers in the United States.

In brief . . .

Building products manufacturers can benefit from Producers' Council through:

• *Grass roots contact* in 53 chapters—a low cost marketing network reaching architects, engineers, building owners, home builders and other "decision makers."

• *An information pipeline* to the construction industry to keep abreast of trends and changing market conditions.

• *Association with a reputable organization* respected for its integrity, quality of membership and leadership in the construction industry.

• *Studies and conferences* on important subjects such as distribution, building systems, land utilization, mortgage financing, and product literature standards.

• *Being an integral part of the "building team"*—on the "inside" of a movement that will govern the destiny of the construction industry of the future and have a tremendous impact on traditional marketing methods.

Some of the Council's activities and services are highlighted on the following pages . . . grouped into Sections on Marketing, Information, and Industry Communication.

"Life used to be enormously uncomplicated for manufacturers of construction materials. They simply supplied boards or beams or tiles and let somebody else worry about assembling them. But, as new materials and new products generated new competition, one manufacturer after another has been forced into strange and complex businesses—not only to protect traditional markets but also to help produce new ones."

The Market Mode—
Pathways to Corporate Growth
Theodore Levitt

Chapters as a marketing tool

• *Chapters in 53 of the nation's major market areas.* Sustained by over 4,000 members, these chapters present product oriented meetings, which are attended by architects, engineers, specification writers, contractors, home builders, building owners, local, state and federal government officials, school and hospital administrators, and many others. Similar meetings are held in the suburbs and over 250 outlying "satellite" cities . . . greatly expanding the marketing base and ensuring local representatives, agents, or distributors of members maximum service and product exposure in the nation's major marketing areas.

For an average chapter dues payment of $150 per year, a member can reach over 1,000 "decision makers" in a favorable business climate where personal contact and mutual trust are paramount. (This type of relationship will take on more importance in the years immediately ahead as the "era of systems building" picks up momentum and the manufacturer, as a participating member of the building team, is involved much earlier in the planning stage.)

The Council chapter program is an excellent marketing service for building products manufacturers . . . a means of utilizing group meetings to lower marketing costs.

Product exhibits . . . display of latest products of all chapter members in urban areas and "satellite" cities.

Speaker meetings . . . important national and local construction industry topics which affect use of products, such as this Honolulu meeting.

Product informational meetings . . . sponsored by one or more member companies to highlight new products, new use or installation technique.

Seminars, open forums, round-table workshops . . . for better intra-industry communication.

Other meetings include:

Box lunch meetings . . . held in the offices of architects and engineers—at the decision making source.

Multi-sponsored/team programs . . . groups of members make combined product/service presentations to select audiences.

What They Say About Producers' Council Chapters

PC Chapter Members

• "It (the chapter) provided me the opportunity to get on a first-name basis with the people most important to my success as a salesman."

• "I joined as a newcomer to the area and saved myself many months of running in circles by getting to meet most of the architects I needed to know, the fast way."

• "I could cite many examples where our products have been specified or approved simply because the architects had become familiar with me, my product and my company through the activities and programs of Producers' Council."

• "Being active in our chapter has increased my contacts and opened many doors, which automatically increased my sales."

• "By attending meetings, I have been able to be in on a great deal of information I might otherwise have missed . . . leads on jobs in early stages, how to handle certain types of people, and the right person to see in larger firms."

• "As a manufacturer's agent, I pay the dues from my own pocket and consider I'm saving money. I know of no other way one man could cover the number of architects I must keep in contact with and at such a small cost."

Low cost product exposure to a select audience of architects, consulting engineers and other specifiers, interested in new product developments and responsible for the specification of many dollars worth of building products.

Specifiers

• "I believe the functions provided by the Producers' Council do a great deal to foster the best relationships between the producer and the architect."

• "Your seminars have been put on with a professional approach and you have given our profession insight into the research activity that manufacturers are giving construction methods and building materials."

• "Any Council member always has his foot in our front door . . ."

• "The monthly informational meetings have fostered a more thorough understanding of the products presented and we are therefore pleased to give prime consideration to those products when planning and specifying."

• "The group presentation method has certainly made me familiar with all Producers' Council members and, as a natural reaction, I like to do business with people I know."

• " . . . the combination of the seminars and the individuals have certainly influenced my attitude in that there is no doubt but what our office always prefers doing business with manufacturers belonging to Producers' Council and the individuals representing them."

Construction Marketing Seminars attract a large audience twice a year to evaluate industry trends, hear economic forecasts, and to be informed of developments in industry and government which will affect corporate planning.

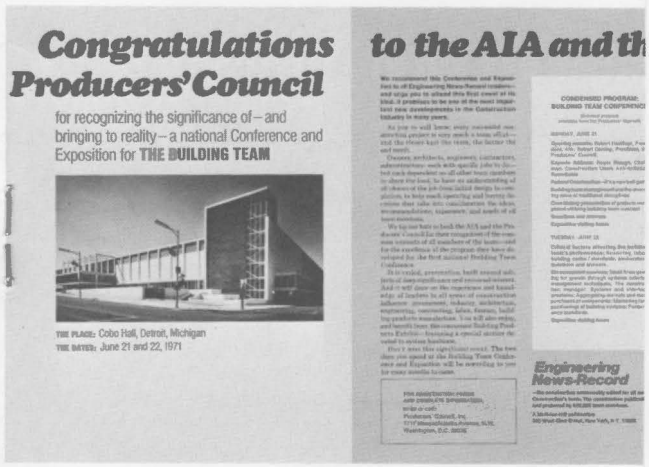
Sales Representatives Institutes provide member firms with an excellent means of instructing new salesmen on buying practices in the construction industry, while alerting veteran salesmen of new industry trends and changing market conditions.

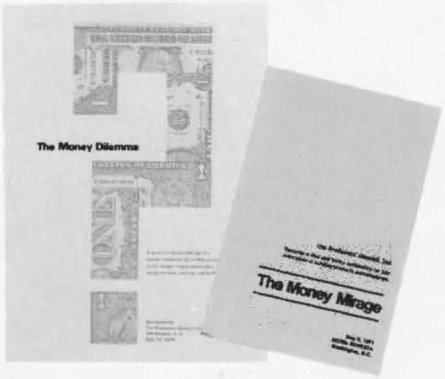
Background Sessions, with limited attendance to enhance discussion and information exchange, are held periodically to review important developments affecting marketing decisions, such as "systems construction" and the impact on traditional marketing methods.

More Marketing Services

The Era of the Building Team

In 1971, the Council launched a new concept . . . the National Conference and Exposition for the Building Team. Inaugurated in conjunction with the convention of The American Institute of Architects, it offers an opportunity for all members of the building team to discuss the critical decisions facing the industry and to view the latest product technology. It will be an annual event . . . a new service for the entire construction industry. For the manufacturer . . . an opportunity to reach *all* the key members of the Building Team—in *one* place . . . at *one* time.





Effective communications is the key to successful operation in today's economy. Market conditions are changing. People are changing. Their methods of operation are changing. In the construction industry more attention is being directed to systems, components, industrialization, performance specifications. Products are becoming more complex. The Council, representing the major producers of building products, has an immense communications job in helping its members keep the industry abreast of the many new products coming onto the market. It meets this challenge with a series of external and internal publications.

INFORMATION

. . . we're building something that is going to last . . . so we are influencing our environment. You and I influence the environment of every person in this nation. Everyone is touched by what you and I do, we've got to do it right . . . *do a better job jointly, instead of going off in our several directions, which has been our characteristic difficulty for ages.*

Robert F. Hastings, FAIA .
"The Hard Choices—
Will We Have the Courage
to Make Them?"

A special conference sponsored by the Council and conducted at the AIA National Convention to examine the Forces Affecting Change in the Construction Industry.

Through its involvement in many industry-wide programs on both national and local levels, the Council is a *strong* influence within the construction world. It assures the presentation of the manufacturers' viewpoint as industry changes occur.

Joint cooperative committees with the American Institute of Architects, the Consulting Engineers Council, the Construction Specifications Institute, and the National Association of Home Builders meet nationally and locally to discuss events and matters of mutual concern. Similar liaison is maintained with contractor and builder groups, construction research groups, building owners and financial institutions, and with that most important "owner," the Federal Government. The Producers' Council maintains constant contact with such major agencies as the General Services Administration, Department of Health, Education, and Welfare, and Department of Housing and Urban Development . . . to alert members to any pending changes in Federal procurement procedures, new approaches in construction, or other government plans or activities that may affect their business.

By its continual contact with *all* members of the Building Team, the Council can channel the manufacturers' viewpoint through its information and education programs.

A conference for building products manufacturers jointly sponsored by the Council and the Building Research Institute to review and evaluate the Federal Government's movement toward building systems and pre-coordinated components.

Sherman Maisel, Member of Board of Governors, Federal Reserve System, speaking before an audience of key executives from Council membership to review the checks and balances affecting money flow in the construction industry. Seated (l. to r.) Dr. Preston Martin, chairman, Federal Home Loan Bank Board, and Kenneth D. McLean, professional staff member of the Senate Committee on Banking & Currency, both of whom participated in the conference. These conferences, conducted annually, search for ways and means of achieving a stable money market which for the manufacturer means a leveling out of the peaks and valleys of production, sales and profit.

Robert L. Kunzig, Administrator of the General Services Administration, at a TV interview during the past Council Annual Meeting, discussing GSA's movement toward building systems and performance specifications.

The Construction Industry Advertising and Product Literature Competition and Conference, designed to assist the manufacturers and their agencies in producing the most effective product data possible. Sponsors of this effort, coordinated and administered by Producers' Council, are seven major organizations in the construction industry.

"During this decade as producers—both large and small—we can expect to be involved in a more expanded role of industry leadership. Recognizing this, the Producers' Council stands ready to serve your firm through a number of effective services geared to to this period of rapid change."

Robert B. Darling
Vice President and General Manager
Barber-Colman of Canada, Ltd.

Producers' Council, Inc.
1717 Massachusetts Ave., N.W.
Washington, D. C. 20036
(202) 667-8727

Rogers Morton Says Public Must Help Conserve Power

Secretary of Interior Rogers B. Morton said yesterday me areas of the

nation must pay as

tention

"We haven't run out

Power Shortages Possible in Area

Energy Crisis Is Predicted By Dr. Lapp

You are Invited
to a Special Seminar
for the Construction Industry

WITH SOME PRACTICAL SOLUTIONS TO

THE ENERGY CRISIS

sponsored by concerned members of
PRODUCERS' COUNCIL, INC.

Crisis of 'immense proportions' in energy, says Interior head

By CLAUDE POWE
Daily Journal Senior Editor

"The nation is facing an energy

" Sec-
C. B.

rado, Wyoming and Utah later this year.

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Udall (D-
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threat to
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Fuel Crisis Faces Nation By Early '80s

By Marilyn Berg
Washington Post Staff

Interior Secretary F
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Power Needs By 1990 Seen Quadrupled

By James L. Rowe Jr.

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State to Investigate Ways To Limit Electricity Use

By MICHAEL KNIGHT

The state's Public Service Commission announced

those con-

emand for Electrical Power Seen Quadrupling by 1990

For a while we didn't pay any attention. We just called it

a *power failure*
or a *fuel shortage*

Now we know better. Now we call it

THE ENERGY CRISIS

and some are predicting that it's only the beginning.

UNLESS . . .

new sources of clean energy are introduced very soon

AND . . .

present supplies are conserved and managed more efficiently.

BUT . . .

at the very least, the costs of energy will rise significantly and the impact on the construction industry, the national welfare, and our individual comfort and convenience could be profound.

SO . . .

it's time for our industry to talk about this situation and come up with some sensible answers.

In short, we must go

BACK TO THE DRAWING BOARD

to find practical solutions through the design of energy-conserving buildings and systems. Energy conservation as a design criterion has high priority today, but could be law tomorrow.

This timely seminar offers you an opportunity to prepare for the future. Among its features:

- **Assessment of energy outlook in our area.**
- **Ideas on designing to conserve energy.**
- **Introduction of new building products and equipment geared to efficient use of energy.**
- **Exhibits and demonstrations of energy-conserving product application.**
- **Facts and figures to prove to owners that a construction penny added is an operating dollar saved.**
- **Review of regulatory moves and proposals.**

Sponsors

American Gas Association

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Grefco, Inc.

Johns-Manville Corp.

Libbey-Owens-Ford Co.

Owens-Corning Fiberglas Corp.

PPG Industries, Inc.

Silbrico Corporation

Westinghouse Electric Corp.

This seminar has been developed in cooperation with major Federal Agencies and prominent authorities in private practice.

POWER BROWNOUTS THIS SUMMER —AREAS ON THE DANGER LIST

There is a strong prospect of widespread power shortages in large areas of the United States this summer.

On March 27, the Chairman of the Federal Power Commission, John N. Nassikas, warned that dangerously low supplies of electricity are ahead in five regions: New York, northern Illinois and Wisconsin, Iowa, Florida — ginia-Carolinas area.

The complete picture electrical-power resources mer has not yet been c

this summer is traced by officials mainly to delays in bringing new generating plants into full operat plants and 35 conve are scheduled to start them are threatened w slow delivery of equi putes and federal rules

to 20 per cent of peak summer demand

CON ED IS FORCED TO CUT VOLTAGE

Peak Demand and a Failure Bring 3% Reduction

By ROBERT D. McADDEN

Confronted with the largest demand for electrical power of the summer and the abrupt loss

Are We Waiting For The Lights to Go Out...

State Plans to Investigate Ways Of Limiting the Use of Electricity

CW YORK TIMES, WEDNESDAY, JULY 19, 1972

Demand for Power Nears Record as Blackout Ends

By LAWRENCE

Swelte
electricity t
the Consoli

THE NEW YORK TIMES, WEDNESDAY, JULY 19, 1972

2 Utility Companies Ask Increases

Two utility companies in the metropolitan region

for rate increases.

Edison Company, which announced

Service Commission to

rates.

Brooklyn Power Restored After 13-Hour Breakdown

By a Washington Post Staff Writer

NEW YORK, July 18— 250,000 New Yorkers

About homes in a ven-square-mile area of Brooklyn were powerless for

Subways, which have independent power sources, continued to operate, though ins were slowed be n Ed supplies elec- r the signals.

were no reports of persons trapped in elevators, a widespread occurence during the 1965 blackout.

A Con Ed an, Roy em was source, vas not e, and feels

Council in New England and with two Canadian utilities, Ontario Hydro and Hydro Quebec.

"Of course the Canadian companies have their peak demands in the winter," said Wallace, "whereas most U.S. utilities have it in the summer. So that provides a little balance."

Heavy use of air conditioning equipment during Monday's 94-degree heat helped cause the disruption

Make sure any air conditioner you buy can pass this save-a-watt test.

the Brook
Frederick W. Sum
pany's gas operations, testified at hea
that operating expenses rose about $10-million from
tion and maintenance
llion in the next four

Demand for Power Nears Record as Blackout Ends

FPC Warns of Major Power Shortages

the New York percent last year. And in the West, the commis- said there is an indicated reserve of 23.8 summer's 18.8 percent.

t, the FPC said, south Virginia-Carolinas area blems if significant out g units are experience generally the warme en air conditioners a

House, to Avert Brownouts, Backs Operation of A-Plants

tion, said he bill was "strictly an interim measure to

The House Interior Committee

The Energy Crisis . . . Build to Avert It

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Peak Capacity

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Vepco said of about 7 only about to be" approved 283 sent to the Senate

Rep. Chet Holifield (D-Calif.) said "We're at dangerously low reserves of power in many parts of the nation and

tic resources.

Bob Burch, chairman of the Import Policy Committee of the Independent Petroleum Association

ge of peak load reduction.

For—

Architects • Engineers • Contractors • Specialty Contractors • Owner/Investors • Building Managers • Public Officials • School, Hospital and Institutional Administrators.