The original documents are located in Box 24, folder "Synthetic Fuels (1)" of the Loen and Leppert Files at the Gerald R. Ford Presidential Library.

HR 12112
SYNFUELS

HOUSE SCIENCE AND TECHNOLOGY

Ambro, Jerome A. (N.Y.)	+	Krueger, Robert (Tex)	*
Bell, Alphonzo (Calif)	*	Lloyd, Jim (Calif)	-
Blanchard, James J. (Mich)	-	Lloyd, Marilyn (Tenn)	+
Blouin, Michael T. (Iowa)	-	McCormack, Mike (Wash)	+
Brown, George E. Jr. (Calif)	+	Milford, Dale (Tex)	+
Conlan , John B. (Ariz)	+	Mosher, Charles A. (Ohio)	+
Dodd, Christopher J. (Conn)	-	Myers, Gary A. (Pa.)	+
Downing, Thomas N. (Va)	+	Ottinger, Richard L. (N.Y.)	-
Emery, David F. (Maine)	+	Pressler, Larry (S.Dak)	+
Esch, Marvin L. (Mich)	+	Roe, Robert A. (N.J.)	-
Flowers, Walter (Ala)	+	Scheuer, James H. (N.Y.)	-
Frey, Louis, Jr. (Fla)	+	Symington, James W. (Mo)	-
Fuqua, Don (Fla)	+	Teague, Olin E. (Tex)	+
Goldwater, Barry M., Jr. (Calif)	-	Thornton, Ray (Ark)	+
Hall, Tim L. (Ill)	-	Waxman, Henry A. (Calif)	-
Harkin, Tom (Iowa)	-	Winn, Larry, Jr. (Kans)	+
Hayes, Philip H. (Ind)	-	Wirth, Timothy E. (Colo)	+
Hechler, Ken (W.Va.)	-	Wydler, John W. (N.Y.)	-
Jarman, John (Okla)	+		

*Absent

Abzug	Anderson, G.	Armstrong	Ashbrook	Aspin	Baucus	Bauman	Bedell	Blouin	Brown, C.	Burton, P.	Coughlin	Dingell	Drinan	Eckhardt	Fish	Fithian	Fraser	Frenzel	Goldwater	Gude	Harkin	Hayes	
		X							X				X	X		X	X						1. Normal Congressional Review and Protocol was not adhered to.
			X			X				X		X	X	X								X	2. "Dear Colleague" ltr in Opposition to the $6 Billion Loan Guarantee Provision for synthetic fuels & Oil Shale Leasing.
		X					X				X		X								X		3. There was poor distribution & Allocation of funds to the particular projects.
		X					X				X		X							X	X		4. The Gov would be subsidizing "Big" Bus in an Uneconomical, Unproven, High-Cost, High-Risk Syn Fuel Venture
							X					X											5. A Bill on Domestic Energy Pro Should Not Contain Funding for Nuclear Weapons Research.
		X											X	X									6. The Questionable Need for Loan Guarantees in These Projects.
						X							X							X	X		7. Gov "Decontrol" is necessary to Promote Free Enterprise in Private Business.
									X			X	X										8. Loan Guarantees would be Intergrated into the President's $100 Billion EIA Program.
						X							X	X							X		9. Environmental and Other Tech Aspects were Yet to be Resolved.
													X										10. "Fact Sheet" Inserted by C/M Dingell which Emphasizes a Number of Points Already Stated.

Symms	Vanik	Studds	Steelman	Staggers	Seiberling	Schroeder	Scheuer	Rousselot	Roncalio	Reuss	Ottinger	Obem	Moss	Moffet	Mink	Mineta	Melcher	Lagomarsino	Kastenmeier	Johnson, J.	Hechler	Hays	
	X				X	X		X		X				X							X		1. Normal Congressional Review and Protocol was not Adhered to.
			X	X	X		X	X		X		X	X		X	X			X				2. "Dear Colleague" ltr in Opposition to the $6 Billion Loan Guarantee Provision for Synthetic Fuels & Oil Shale Leasing
	X					X					X			X							X	X	3. There was Poor Distribution & Allocation of Funds to the Particular Projects.
	X				X	X			X		X			X			X				X	X	4. The Gov would be Subsidizing "Big" Bus in an Uneconomical, Unproven, High-Cost, High-Risk Syn Fuel Venture.
														X									5. A Bill on Domestic Energy Pro Should Not Contain Funding for Nuclear Weapons Research.
	X								X		X			X							X	X	6. The Questionable Need for Loan Guarantees in These Projects
	X	X							X		X			X				X			X	X	7. Gov "Decontrol" is necessary to Promote Free Enterprise in Private Business.
		X									X										X		8. Loan Guarantees would be Intergrated into the President's $100 Billion EIA Program.
		X							X		X			X							X		9. Environmental and Other Tech Aspects were Yet to be Resolved.
											X												10. "Fact Sheet" Inserted by C/M Dingell which Emphasizes a Number of Points Already Stated.

ERDA LOAN GUARANTEE LEGISLATION

Congressional Record Review

The Congressional Record of December 11, which recorded the arguments opposing Sections 102 and 103 (loan guarantee provisions) of ERDA Authorization Bill (H.R. 3474), has been reviewed by Pacific Coal personnel. The main arguments causing these sections to be stricken from the legislation are summarized below. The sections were rejected by a vote of 263 to 140.

1. Normal Congressional review and protocol was not adhered to.

2. "Dear Colleague" letter in opposition to the $6 billion loan guarantee provision for synthetic fuels and oil shale leasing.

3. There was poor distribution and allocation of funds to the particular projects.

4. The government would be subsidizing "big" business in an uneconomical, unproven, high-cost, high-risk synthetic fuel venture.

5. A bill on domestic energy programs should not contain funding for nuclear weapons research.

6. The questionable need for loan guarantees in these projects.

7. Government "decontrol" is necessary to promote free enterprise in private business.

8. Loan guarantees would be integrated into the President's $100 billion EIA program.

9. Environmental and other technical aspects were yet to be resolved.

10. "Fact Sheet" inserted by Congressman Dingell which emphasizes a number of points already stated.

For further reference, we have expanded the above categories and have noted their location in the Congressional Records. That detail follows.

	House Member	Reference	Page
1. Normal Congressional review and protocol was not adhered to.	Mr. Bolling	a	H12337
	Mr. Hechler	a,c	H12340
	Mr. Ottinger	c	H12340
	"	a,c	H12420
a) The House Members were not given sufficient time nor information to properly review H.R. 3474.	Mr. Dingell	a,d	H12372
	"	a	H12419
	Mr. Harkin	b	H12373
b) Notes on the hearings held before the ERDD-Fossil Fuels Subcommittee were not printed for House members review. These meetings were held between the months of September and October of 1975.	Mr. Armstrong	c	H12387
	"	c	H12415
	Mr. Fish	b	H12388
	Mr. Brown	d	H12389
	"	a	H12340
	Mr. Roncalio	a	H12390
c) Addition of Sections 102 and 103 by the Senate and changes by the conference committee were completely inconsistent with normal Congressional procedure.	Mr. Anderson	c	H12391
	Ms. Schroeder	b	H12392
	"	b	H12412
	Mr. Drinan	d	H12396
	Mr. Vanik	a,c	H12397
	Mr. Moffett	a,c	H12398
d) Due to lack of Congressional review, energy priorities and structuring were poorly dealt with.	Mr. Eckhardt	c	H12415
	Ms. Abzug	a	H12415
	Mr. Seiberling	a	H12417
	Mr. Gude	a	H12418
2. The "Dear Colleague" letter in opposition to the $6 billion loan guarantee provision for synthetic fuels and oil shale leasing. Attached is a list of the members who signed the letter.	Mr. Dingell		H12373
	Mr. Fish		H12388

	House Member	Reference	Page
3. There was poor distribution and allocation of funds to the particular projects.	Mr. Hechler	a,c	H12339
	Mr. Hays	b	H12359
	"	a	H12394
a) Insufficient funds were allocated to "renewable energy sources" such as solar energy, geothermal energy, biomass, and others.	Mr. Dingell	d	H12373
	Mr. Harkin	a	H12387
	Mr. Fish	a	H12388
	"	a	H12415
	Mr. Ottinger	a,c	H12394
b) Energy conservation and energy usage were not given high enough priority in the H.R. 3474 format.	Mr. Drinan	a	H12397
	Mr. Vanik	a,d	H12397
	Mr. Moffett	a,c	H12398
	Mr. Bedell	a,c,d	H12399
c) Nuclear research and development was receiving far too much funding in the ERDA bill.	Ms. Schroeder	a	H12411
	Ms. Abzug	a,b,c	H12415
	Mr. Gude	d	H12421
d) Very few companies would benefit from this loan guarantee program. In fact, the bulk of the funds would be going to two oil shale and four high-Btu coal gasification projects.			
4. Government would be subsidizing "big" business in an uneconomical, unproven, high-cost, high-risk synthetic fuel venture.	Mr. Seiberling	c	H12339
	"	c	H12417
	Mr. Ottinger	a,f	H12340
	"	b	H12392
a) The editorial "Burp!" in the Wall Street Journal (attached) describes the loan guarantees as being a "rip-off" on the consumer, a "Christmas present" to the petroleum companies, fiscal gimmickry, funding of uneconomic synfuel projects, and greater government interference.	Mr. Hechler	a	H12340
	"	b	H12400
	"	b	H12406
	"	c	H12407
	"	c	H12409
	"	e,f	H12410
	"	d	H12420
	"	c	H12368
	Mr. Mosher*	c	H12368

*For Section 103

b) Government and taxpayers would be taking 75% (up to 100% during construction) of the risk, the consumer would be supporting these projects by paying higher prices for U.S. fuels, and the industry would take 100% of the profits.

c) Neither the government nor the public would benefit from this synthetic fuel project. Both technology and patents would not be public property even in the case of default by the company.

d) Coal Gasification is most uneconomical method of converting coal to natural gas.

e) Coal Gasification still an unproven commercial process.

f) Government would be subsidizing some of the largest petroleum corporations in the country.

g) The bill would bail out energy companies from their financial obligations and enhance their monopolistic hold on energy within the country.

h) Many of the major programs related to energy policies have yet to be resolved; (such as national stripmining bill, coal mining policy, lands, etc.).

House Member	Reference	Page
Mr. Hechler	a,b	H12372
"	b,f	H12405
"	h	H12408
Mr. Dingell	b	H12373
"	d,e,g	H12373
"	d,g	H12419
Mr. Goldwater	c	H12374-84
Mr. Winn*	c	H12384
Mr. Armstrong	g	H12387
Mr. Roncalio	a,e	H12390
"	a,d	H12396
Mr. Hays	d	H12393
"	a,c,g	H12420
Mr. Drinan	d	H12397
Mr. Vanik	c,d	H12397
Mr. Moffett	d,f,g	H12398
Mr. Bedell	b,h	H12399
Ms. Schroeder	d	H12411
Mr. Melcher	d,h	H12412
Ms. Abzug	a,d	H12414
Mr. Seiberling	c	H12339
"	c	H12417
Mr. Bauman	g	H12418
Mr. Gude	d	H12418

*For Section 103

	House Member	Reference	Page
5. A bill on domestic energy programs should not contain funding for nuclear weapons research.	Mr. Moffett		H12398
	Mr. Bedell		H12399
	Ms. Abzug		H12415
	Mr. Dingell		H12418
6. The questionable need for loan guarantees in these projects.	Mr. Hechler	b	H12372
	"	c	H12405
	"	c	H12408
a) Three large oil companies have been on record as saying they are willing to build their own plants without loan guarantees. They are: Superior Oil, Standard Oil of Indiana, and Gulf Oil Company.	Mr. Dingell	b	H12372
	"	a,b	H12419
	Mr. Johnson	a,b	H12384
	"	a	H12411
	Mr. Ottinger	a	H12339
	"	c	H12384
	"	a	H12392
b) The government would be subsidizing some of the largest corporations in the country and would just be protecting their profits.	Mr. Roncalio	b	H12396
	Mr. Vanik	b,c	H12397
	Mr. Moffett	b,c	H12398
	Mr. Armstrong	a	H12415
c) The loan guarantees would create imbalance and inequality because they would just be helping a very few companies which ERDA decides to assist.	Mr. Eckhardt	b	H12415
	Ms. Abzug	b	H12415
	Mr. Hays	b	H12420
7. Government "decontrol" is necessary to promote free enterprise in private business.	Mr. Hechler		H12372
	Mr. Winn		H12384
	Mr. Roncalio		H12391
	Mr. Ottinger		H12392
	Mr. Vanik		H12397
	Mr. Moffett		H12398
	Mr. Johnson		H12384
	"		H12412
	Mr. Goldwater		H12413
	Mr. Eckhardt		H12415
	Mr. Symms		H12417
	Mr. Bauman		H12418
	Mr. Gude		H12421
	Mr. Lagomarsino		H12417

	House Member	Reference	Page
8. Loan guarantees would be integrated into the President's $100 billion EIA program.	Mr. Ottinger		H12340
	Mr. Hechler		H12372
	"		H12400
	"		H12409
	Mr. Dingell		H12372
	Mr. Brown		H12388
	Mr. Drinan		H12396
	Mr. Symms		H12417
9. Environmental and other technical aspects were yet to be resolved.	Mr. Hechler		H12372
	"		H12410
	Mr. Dingell		H12373
	Mr. Roncalio		H12391
	Mr. Drinan		H12397
	Mr. Vanik		H12397
	Mr. Bedell		H12399
	Mr. Moffett		H12399
	Mr. Symms		H12415
	Mr. Gude		H12416
	Mr. Ottinger		H12420
10. "Fact Sheet" (attached) inserted by Congressman Dingell which emphasizes a number of points already stated.	Mr. Dingell		H12373

RHK:gha
Attachments

SIGNERS OF THE "DEAR COLLEAGUE" LETTER

The following Members have signed a "Dear Colleague" letter in opposition to the $6 billion loan guarantee provision for synthetic fuels and oil shale leasing:

Schroeder (Colo.), Ottinger (N.Y.), Moffett (Conn.), Rousselot (Calif.), Fithian (Ind.), Ashbrook (Ohio), Eckhardt (Texas), Vanik (Ohio), Lagomarsino (Calif.), Studds (Mass.), Seiberling (Ohio), Mineta (Calif.), Mink (Hawaii), Moss (Calif.), Baucus (Mont.), and Coughlin (Pa.).

Reuss (Wisc.), Obey (Wisc.), Hayes (Ind.), Blouin (Iowa), Dingell (Mich.), Burton, P. (Calif.), Staggers (W. Va.), Scheuer (N.Y.), Armstrong (Colo.), Aspin (Wisc.), Kastenmeier (Wisc.), Melcher (Mont.), Frenzel (Minn.), Fraser (Minn.), Steelman (Texas), and Roncalio (Wyo.).

"FACT SHEET" BY CONGRESSMAN DINGELL

The following points argue for the rejection of Sections 102 and 103 of the ERDA Authorization Bill (H.R. 3474).

1. These sections were added in Conference by the Senate and were not part of the original House bill. This is the only opportunity for the House to consider a 6+ billion dollar program.

2. The 6+ billion dollar subsidy is not needed for oil shale and a questionable investment in high BTU coal gasification. The National Petroleum Council and Bureau of Mines estimate the cost of shale oil at $5.15 to $6.15/Bbl. This is well below the current market price. The major promoters of shale oil put their cost at about $4/Bbl. The cost of high BTU gas is estimated at about $4/Mcf, which is equivalent to $22/Bbl oil.

3. The major investors in shale oil include 8 of the top 10 domestic oil companies. Their assets are well in excess of $100 billion. They do not need subsidy!!!

4. The $6 billion loan guarantee program will distort the capital markets and give these synthetic fuel projects preference over others seeking capital.

5. Loan guarantees will remove these securities from SEC control and constrain the development and dissemination of the information the program is intended to develop. There are no provisions for independent public audits of the projects' costs and operations.

6. Those who are being asked to take the risk-the U.S. taxpayer-will not share in the profits of success. Alternative public financing techniques, where the public would share in the benefits of success, have not been fully explored. (TVA, Comsat, Governmental Partnership, Incentive Fee Contracts, etc.).

7. A cost-benefit analysis, prepared for ERDA, estimates a $1.6 billion difference of costs over benefits.

Article from The Wall Street Journal

BURP!

The cover of the current issue of Newsweek is suitable for framing and would make a nice Christmas present for every member of Congress. Under a headline that reads, simply, Big Government, sits an illustrated Uncle Sam weighing several hundred pounds, bloated and ready to burst.

How does he get so fat? Even though he knows he should slim down, Sam cannot resist eating tempting morsels. This week it's a $6 billion loan-guarantee program of the Energy Resources Development Administration to develop synthetic fuels. The bureaucrats say "synfuel". When this bold new program hit the Senate floor Tuesday, it was gobbled up by an 80-to-10 vote. No hearings. Almost no debate. About the only opposition came from the liberal Democrats, not because another $6 billion is fattening, but because it doesn't suit their environmental tastes.

Why should the federal government be getting into the business of developing synthetic fuels? Well, er, there's an energy crisis, isn't there? Can't we invent our way out of it? Like the Manhattan Project? Turn our scientists loose and have them find ways to turn coal into gas or coal into oil or squeeze the petroleum out of shale. Private enterprise, not Uncle Sam, really does the job. The government only puts up the cash, indirectly, by guaranteeing loans that banks would otherwise deem too risky. Jobs will be created, won't they? And because Uncle Sam doesn't do any of the actual work, it doesn't make the government bigger, does it?

It is this kind of rationalization that tempts even the congressional conservatives, who would decry the scheme if it meant setting up a Federal Synfuel Corporation. But there is no significant difference in handling the scheme one way or the other. ERDA bureaucrats, not the marketplace, will decide which synfuel projects get the priorities. ERDA bureaucrats, not the marketplace, will decide which companies get the loan guarantees. ERDA bureaucrats, after heavy lobbying from the politicians, will decide which regions of the nation will be favored with demonstration projects.

To their credit, the great majority of petroleum companies oppose this scheme because they know how damaging it will be to the national economy. Instead of applying their financial and technical resources to research projects that seem to be the most economically promising, the industry will be wagged

by Washington. To remain competitive, companies will be forced to focus their efforts on politically pet projects, engaging in energy grantsmanship in the same way that city and state officials fought for federal matching funds in "solving" the urban crisis. Cities abandoned their own priorities, for which no free money was available, and adopted the federal priorities. The $6 billion ERDA scheme is conceptually the same as an urban renewal scheme, and might as well be called Energy Renewal.

The fact that the $6 billion would not be a direct expenditure of tax money, and would not show up as an item in the federal budget, is only fiscal gimmickry. The economic effect is the same as if the government squeezed $6 billion in taxes out of the private economy where it would be spent economically, and shoveled it into projects that are, by definition, uneconomic.

There is business support for the ERDA scheme, mostly from the natural gas producing and pipeline companies, which have become uneconomic because of previous meals Uncle Sam has made of them through price controls. They apparently figure they might as well blend uneconomically low-priced gas with uneconomically high-cost gasified coal and somehow come out even. Thus, the solution to problems caused by government interference is more government interference.

Although they might hate to admit it, those conservatives who so easily swallowed the ERDA bill helped move Uncle Sam toward nationalization of the energy industry. The synfuel project will inevitably become more costly, wasteful, corrupt and politicized, and as a "solution" to these problems Uncle Sam will be asked to step in and do the job right. That's how he gets so fat.

DRAFT

RECOMMENDATIONS FOR A

SYNTHETIC FUELS COMMERCIALIZATION PROGRAM

A BRIEF SUMMARY

SYNFUELS INTERAGENCY TASK FORCE
to
THE PRESIDENT'S ENERGY RESOURCES COUNCIL

In his January 1975 state-of-the-union message, the President announced a goal of assuring early commercialization of synthetic fuels in the United States.

An Interagency task force was formed in February by OMB under the aegis of the Energy Resources Council to examine alternatives for implementing the President's goal.

The task force has completed its analyses and recommendations which included consideration of:

- *The economic and environmental costs and benefits of alternative -size programs.*
- *The effectiveness and costs of alternative incentives which might be offered to industry by the federal government, and*
- *The measures needed for rapid program implementation.*

The task force's recommendations are based on a comprehensive set of analyses involving the participation of more than 50 federal employees from more than 10 agencies who were supported by an equal number of consultants and analysts from several major contractors.

This brief summary provides an overview of the major results, conclusions and recommendations of the Synthetic Fuels Task Force. A more complete description of the Task Force's efforts is contained in the four volume report entitled: Recommendations for a Synthetic Fuels Commercialization Program.

CONTENTS

1

MAJOR PROGRAM OBJECTIVES

THE SYNTHETIC FUELS COMMERCIALIZATION PROGRAM OBJECTIVES ARE:

- TO INITIATE A U.S. SYNTHETIC FUELS INDUSTRY BY:
  - DEMONSTRATING AVAILABLE AND FORTHCOMING TECHNOLOGY AT A COMMERCIAL SCALE
  - GAINING EARLY ENVIRONMENTAL, ECONOMIC, INSTITUTIONAL, AND TECHNICAL INFORMATION ON LARGE SCALE PLANTS
- TO INCREASE DOMESTIC ENERGY PRODUCTION AND THEREBY:
  - REDUCING RELIANCE ON ENERGY IMPORTS
  - PROVIDING LESS EXPENSIVE SUPPLIES IF WORLD OIL PRICES CONTINUE TO RISE
- TO IMPROVE THE U.S. INTERNATIONAL POSITION IN ENERGY MATTERS BY:
  - DEMONSTRATING U.S. CAPABILITY TO TAP ITS VAST RESOURCES
  - ESTABLISHING U.S. LEADERSHIP AMONG ENERGY CONSUMING NATIONS.

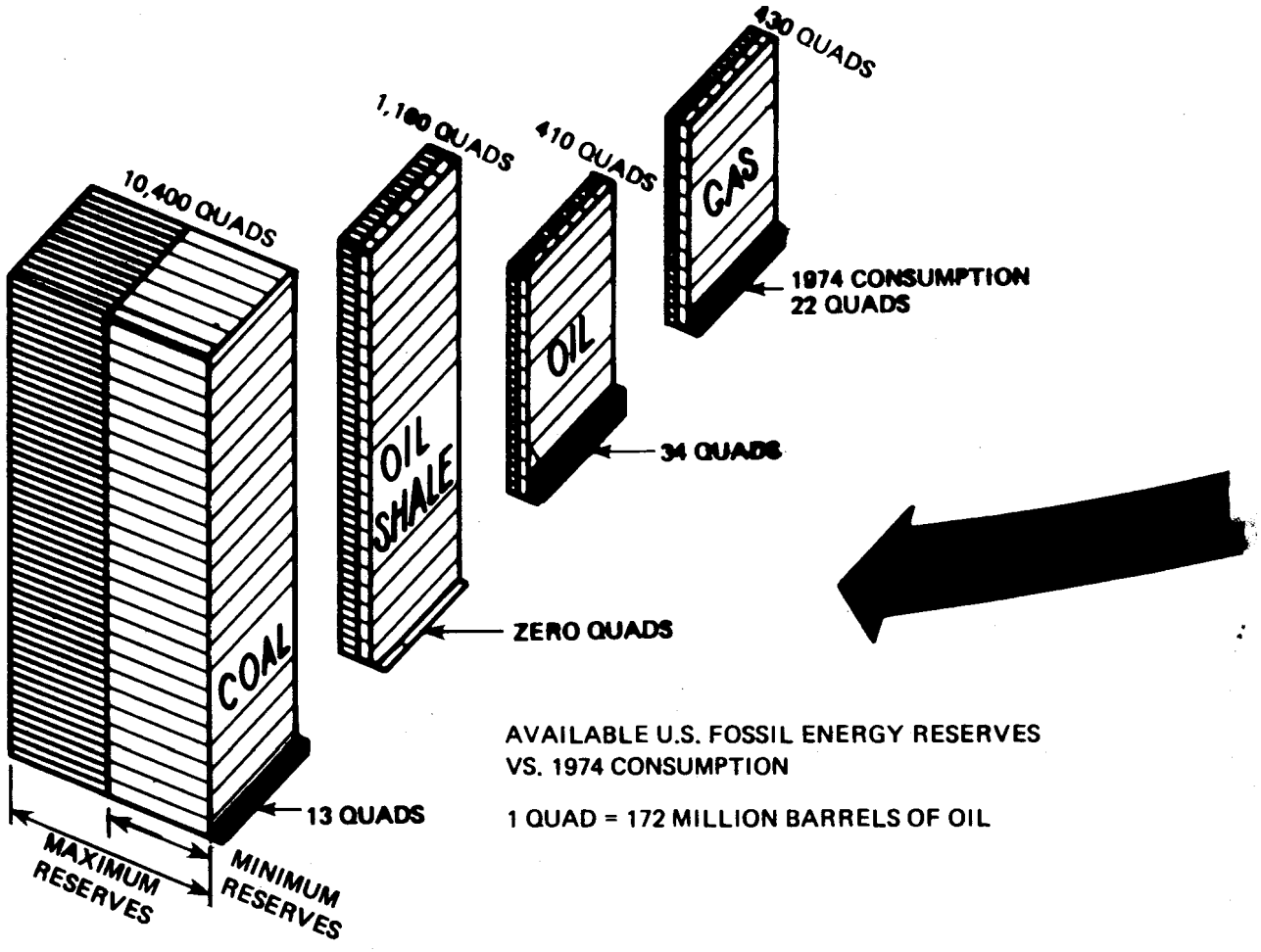
MAJOR CONCLUSIONS AND RECOMMENDATIONS

- THE UNITED STATES WILL NEED SIGNIFICANT AMOUNTS OF SYNTHETIC FUELS IN THE 1985 – 1995 TIME FRAME AND BEYOND
- BECAUSE OF ECONOMIC, REGULATORY AND OTHER UNCERTAINTIES, THERE IS NO ASSURANCE OF ADEQUATE INDUSTRY DEVELOPMENT IN THIS TIME FRAME WITHOUT INCENTIVES
- A TWO PHASE JOINT FEDERAL/INDUSTRY PROGRAM CAN LEAD TO 1,000,000 BARRELS/DAY BY 1985 AND WOULD START WITH A LOW RISK 350,000 BARREL/DAY FIRST PHASE
- TARGETED FINANCIAL INCENTIVES CAN MEET INDUSTRY NEEDS WITH MINIMUM GOVERNMENT INVOLVEMENT AND EXPECTED COST
- RAPID IMPLEMENTATION CAN BE ACHIEVED THROUGH USE OF AN EXISTING FEDERAL AGENCY WITH MINIMUM NEED FOR NEW LEGISLATION.

2

WHAT IS THE SYNTHETIC FUELS PROGRAM?

- THE SYNTHETIC FUEL COMMERCIALIZATION PROGRAM PROVIDES INCENTIVES TO INDUSTRY SO THAT:
  - FIRST PLANTS CAN BE BUILT AND OPERATED
  - PEOPLE CAN BE TRAINED
  - SYNTHETIC FUELS CAN BE PRODUCED
  - WE CAN ACHIEVE REDUCED DEPENDENCY ON FOREIGN OIL AND GAS



AVAILABLE U.S. FOSSIL ENERGY RESERVES VS. 1974 CONSUMPTION

1 QUAD = 172 MILLION BARRELS OF OIL

QUESTION: *The President has asked for a U.S. capability to produce synthetic fuels at the rate of one million barrels of oil per day by 1985. What kind of a program are we talking about?*

ANSWER: THE FEDERAL SYNTHETIC FUELS COMMERCIALIZATION PROGRAM WOULD PROVIDE APPROPRIATE INCENTIVES TO INDUSTRY TO CONSTRUCT AND OPERATE A NUMBER OF COMMERCIAL SCALE SYNTHETIC FUEL PLANTS FOR CONVERTING ABUNDANT U.S. ENERGY RESOURCES INTO CLEAN LIQUIDS AND GASEOUS FUELS.

What, exactly, are these "abundant U.S. energy resources" and how can they satisfy the President's goal?

COAL AND OIL SHALE WOULD BE THE PRIMARY RESOURCES WHICH WOULD PROVIDE THE FEEDSTOCKS FOR SYNTHETIC FUELS PLANTS. HOWEVER, OTHER DOMESTIC RESOURCES SUCH AS ORGANIC WASTE COULD ALSO BE CONVERTED INTO CLEAN LIQUID AND GASEOUS FUELS.

WE CURRENTLY PRODUCE ABOUT 11 MILLION BARRELS OF OIL PER DAY, CONSUME ABOUT 17 MILLION BARRELS OF OIL PER DAY AND USE OTHER FOSSIL NUCLEAR AND HYROELECTRIC ENERGY SOURCES FOR A TOTAL OF 36 MILLION EQUIVALENT BARRELS OF OIL PER DAY. THE REQUIREMENT FOR ENERGY FROM LIQUIDS AND GASES IS STEADILY INCREASING. HOWEVER, THERE IS A LARGE DISPARITY BETWEEN THE TYPES OF FOSSIL ENERGY THAT WE HAVE AND THE TYPES WE CONSUME.

THIS GRAPH SHOWS THE MAJOR ROLE THAT OUR LARGE COAL AND OIL SHALE RESERVES COULD PLAY IN SUPPORTING OUR NATIONAL ENERGY NEEDS COMPARED WITH OIL AND GAS.

How will the President's goal be met?

TO MINIMIZE RISKS WITHOUT PENALIZING TECHNICAL DEVELOPMENTS OF FULL-SCALE PLANTS. A TWO PHASE 1,000,000 BARREL PER DAY PROGRAM WOULD BE STARTED AT THE 350,000 BARREL PER DAY LEVEL ON A TIME-SCALE THAT WILL PERMIT ACCELERATION TO THE FULL 1,000,000 BARREL PER DAY CAPACITY BY 1985. THIS WILL ALLOW EARLY ASSESSMENT OF TECHNICAL, ECONOMIC, AND ENVIRONMENTAL FACTORS. IN EXAMINING THE PRESIDENT'S GOAL, THE TASK FORCE CONSIDERED VARIOUS SIZED INITIAL PROGRAMS RANGING FROM 350,000 BARRELS PER DAY TO 1,700,000 BARRELS PER DAY.

Many energy related programs are in progress and others are being formulated. How does the synthetic fuels program complement other domestic energy programs including ERDA'S fossil energy R&D program?

THE SYNTHETIC FUELS PROGRAM WOULD BE AIMED AT DEMONSTRATING EXISTING TECHNOLOGY AT COMMERCIAL SCALE PRIMARILY TO INVESTIGATE ENVIRONMENTAL, ECONOMIC, REGULATORY, AND OTHER NON-TECHNICAL ASPECTS OF SYNTHETIC FUELS PRODUCTION AND UTILIZATION. THE PROGRAM WOULD COMPLEMENT ERDA'S R&D EFFORTS WHICH ARE AIMED AT ADVANCING THE TECHNOLOGY TO IMPROVE PROCESS EFFICIENCIES AND REDUCE OVERALL PLANT COSTS.

3

THE GOOD NEWS

WE CAN GET MORE OIL AND GAS OUT OF EXISTING FIELDS.

WE CAN GET MORE OIL AND GAS FROM OCS AND ALASKA.

NUCLEAR POWER WILL ALSO PROVIDE A LARGE CONTRIBUTION.

SOLAR, WIND, GEOTHERMAL AND CONSERVATION CAN HELP.

THE BAD NEWS

IN THE LATE 1980'S DOMESTIC SUPPLIES OF OIL AND GAS WILL DECLINE RAPIDLY EVEN WITH GAS DEREGULATION, OIL DECONTROL AND EXTENSIVE OCS AND ALASKA DEVELOPMENT.

MOST INDUSTRIAL PLANTS, SPACE HEATING AND TRANSPORTATION SYSTEMS ARE DESIGNED FOR OIL AND GAS.

SOLAR, WIND AND GEOTHERMAL STILL HAVE LONG RESEARCH AND DEVELOPMENT LEAD TIMES.

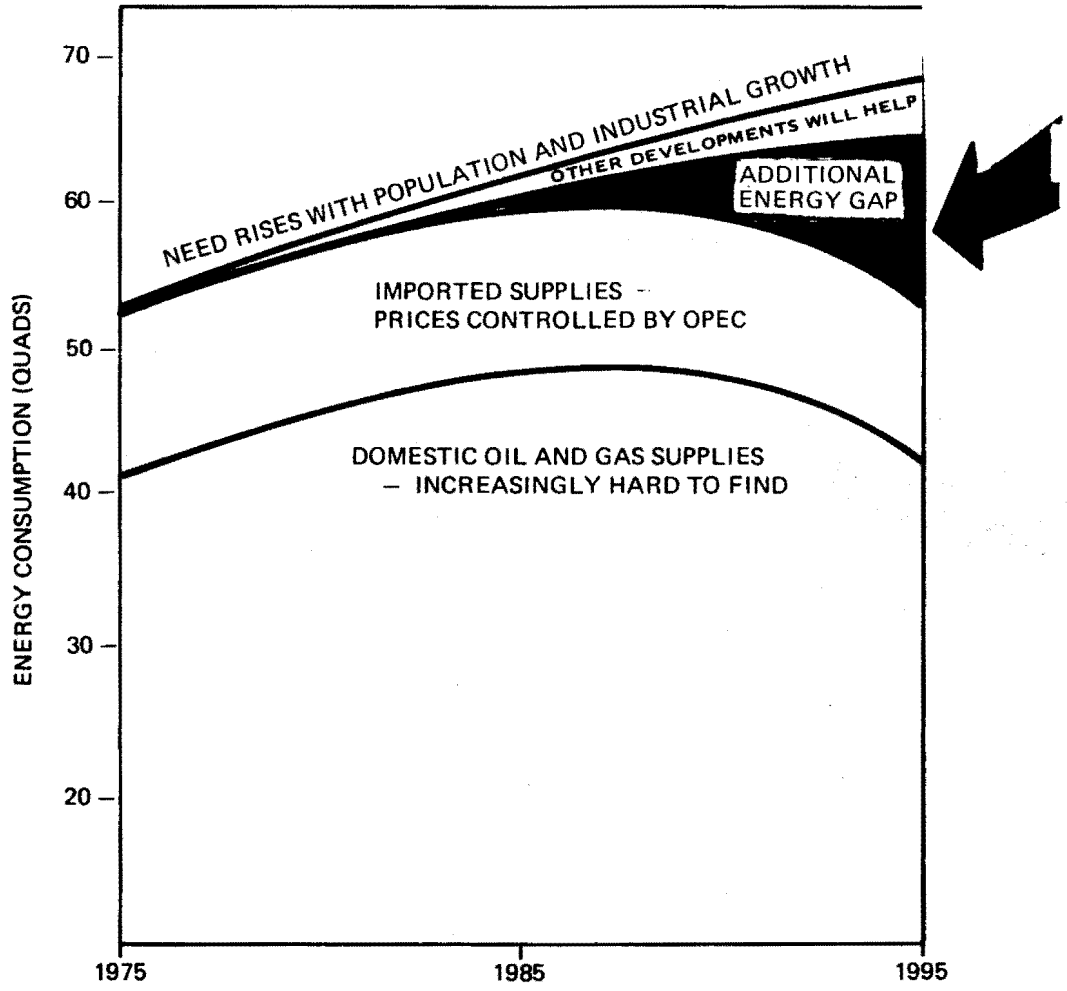
CONSERVATION OF THE ABOVE FUELS CAN NOT FILL THE GAP ALONE.

WHY DO WE NEED A SYNTHETICS FUELS PROGRAM NOW?

THERE IS A GAP BETWEEN DOMESTIC ENERGY NEEDS AND SUPPLIES.

THE GAP IS STEADILY GROWING.

DEVELOPMENT LEAD TIMES FOR A SYNTHETIC FUELS INDUSTRY WILL REQUIRE EARLY INITIATION OF SYNTHETIC FUEL COMMERCIALIZATION.



QUESTION: The late 1980's are a long way off. Large power plants and refineries can ordinarily be built in 3 to 7 years. Why do we need to initiate a program now?

ANSWER: BECAUSE THE LEAD TIME ASSOCIATED WITH INITIATING A TOTALLY NEW INDUSTRY IS LONG – 10 TO 15 YEARS.

How can we be sure we are't moving out too soon?

DOMESTIC SUPPLIES OF OIL AND GAS ARE PROJECTED TO DECLINE BEGINNING IN THE LATE 1980'S. PRODUCTION OF NATURAL GAS HAS ALREADY FALLEN IN THE LAST SEVERAL YEARS AND EVEN WITH DEREGULATION, SUPPLIES WOULD ONLY BE EXTENDED 5-10 YEARS. EVEN USING ADVANCED OIL AND GAS RECOVERY TECHNIQUES AND EXTENSIVE PRODUCTION FROM THE OUTER CONTINENTAL SHELF AND ALASKA, IMPORTS WOULD CONTINUE TO RISE SUBSTANTIALLY IF SYNTHETIC FUELS WERE NOT AVAILABLE.

Why can't we increase our supplies of other fuels including nuclear so that we will not need synthetic fuels so soon?

THE PROJECTIONS THAT SYNTHETIC FUELS WILL BE NEEDED IN SUBSTANTIAL QUANTITIES IN THE 1990'S ARE BASED ON FAIRLY OPTIMISTIC ESTIMATES OF DOMESTIC PRODUCTION OF OIL AND GAS AND ALSO ASSUME SUBSTANTIAL GROWTH IN NUCLEAR POWER. IF ANY OF THESE SUPPLIES FAIL TO PROVIDE WHAT WE EXPECT THEN THE NEED FOR SYNTHETIC FUELS COULD BE MUCH MORE THAN THE ESTIMATED DEMAND FOR 1995 (5 MILLION BARRELS PER DAY). TO MEET EXPECTED U.S. ENERGY DEMAND WITHOUT LARGE OIL IMPORTS, WE MUST PURSUE DEVELOPMENT OF ALL OF OUR RESOURCES. IT IS NOT A QUESTION OF CHOICE.

What about reducing demand? Why can't we conserve more energy and thus put off synthetic fuels until we get geothermal energy or other clean renewable resources such as solar energy?

EVEN IF OUR CONSERVATION EFFORTS AND OTHER ALTERNATIVE ENERGY RESOURCE DEVELOPMENT EFFORTS ARE MORE SUCCESSFUL THAN WE EXPECT, THE NEED FOR SYNTHETIC FUELS WILL STILL BE SUBSTANTIAL IN THE 1990'S. ALTHOUGH THERE IS NO QUESTION THAT WE SHOULD PURSUE ALL AVAILABLE ALTERNATIVES, THERE IS NO WAY THAT WE CAN SUBSTANTIALLY REDUCE THE NEED FOR SYNTHETIC FUELS IN THE 1990'S.

If we have so much coal, why don't we just burn it directly? Why do we need to convert it to oil and gas?

ALTHOUGH WE CAN BURN COAL DIRECTLY IN LARGE INDUSTRIAL AND ELECTRICAL POWER PLANT APPLICATIONS WHERE EXISTING ENVIRONMENTAL CONTROL TECHNOLOGY IS ADEQUATE, THERE ARE NUMEROUS APPLICATIONS OF PETROLEUM AND NATURAL GAS FOR WHICH COAL CANNOT SUBSTITUTE. COAL CANNOT BE ECONOMICALLY AND DIRECTLY USED FOR HOME HEATING, AS A TRANSPORTATION FUEL, AS A CHEMICAL FEEDSTOCK, OR IN MOST ELECTRIC GENERATING PLANTS WHICH HAVE BEEN DESIGNED FOR OIL AND GAS FUELS.

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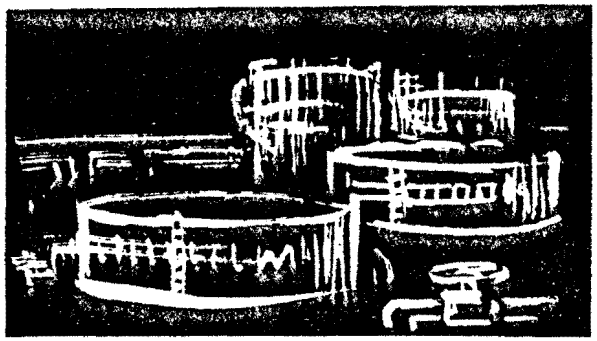
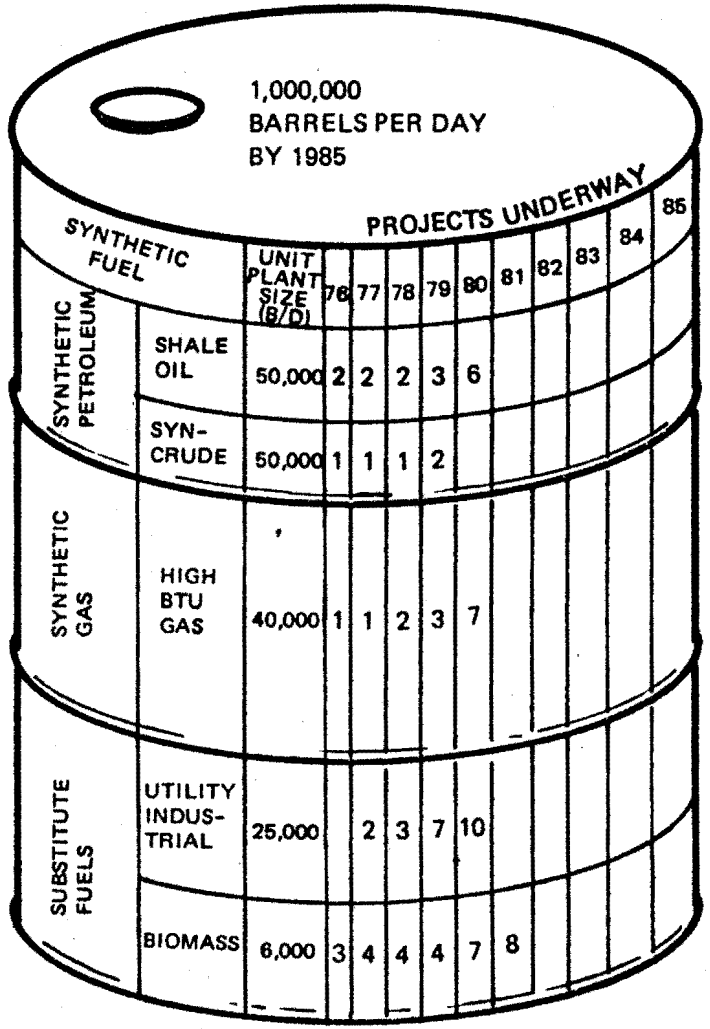


HOW WILL IT BE DONE?

- THE RECOMMENDED INCENTIVES ARE DESIGNED TO MINIMIZE FINANCIAL RISKS, AND TO THEREBY ENCOURAGE INDUSTRY TO UNDERTAKE INVESTMENT IN SYNTHETIC FUEL PRODUCTION.

POSSIBLE SCHEDULE FOR CUMULATIVE PLANT BUILD-UP



QUESTION: *A plan for a program is not enough. To accelerate the use of coal and oil shale resources, a program must not only make economic sense and be technically feasible, it must also entice industry to modify their existing investment plans. How can we ensure industry support and participation?*

ANSWER: FINANCIAL AND OTHER INCENTIVES HAVE BEEN DEVISED TO MEET BOTH THE NEEDS OF THE CONSUMER AND THOSE OF THE PROBABLE INVESTMENT SOURCES. THE FOLLOWING TABLE SUMMARIZES THE TYPE OF INCENTIVES THAT ARE RECOMMENDED:

FUEL	COMPETITIVELY AWARDED*
SYNTHETIC PETROLEUM SHALE OIL SYNCRUDE	PARTIAL NON-RECOURCE LOAN GUARANTEE AND PRICE SUPPORT
SYNTHETIC GAS HIGH BTU - REGULATED	PARTIAL NON-RECOURSE LOAN GUARANTEE
SUBSTITUTE FUELS UTILITY INDUSTRIAL A. UNREGULATED	A. PARTIAL NON-RECOURSE LOAN GUARANTEE AND PRICE SUPPORT
B. REGULATED	B. CONSTRUCTION GRANT
BIOMASS	PARTIAL NON-RECOURSE LOAN GUARANTEE

*A NON-RECOURSE GUARANTEED LOAN FOR PART OF PROJECT COST:

- GOVERNMENT GUARANTEES PAYMENT OF PRINCIPAL AND INTEREST FOR LOAN FUNDED IN THE PRIVATE SECTOR
- COVERS ONLY CAPITAL COSTS BEFORE STARTUP
- GOVERNMENT WOULD NOT RECOVER LOSSES – IN THE EVENT OF FAILURE – FROM THE CORPORATION, ALTHOUGH IT WOULD RECOVER ASSETS OF THE PROJECT.

PRICE SUPPORTS:

- GOVERNMENT PAYS THE SYNFUEL PRODUCER THE DIFFERENCE BETWEEN AN AGREED UPON SUPPORT LEVEL AND MARKET PRICES.

CONSTRUCTION GRANT:

- COVERS PERCENTAGE OF INITIAL CONSTRUCTION CAPITAL REQUIREMENTS.

THE RECOMMENDED INCENTIVES WERE SELECTED FROM A VARIETY OF OPTIONS. THESE INCLUDED TAX CHANGES (E.G. INVESTMENT TAX CREDITS, CONSTRUCTION EXPENSING, AND ACCELERATED DEPRECIATION) AND GOVERNMENT-OWNED MANAGEMENT STRUCTURES.

CRITERIA FOR EVALUATION OF INCENTIVE OPTIONS EMPHASIZED MINIMUM EXPECTED COST TO GOVERNMENT AND INDUSTRY, EFFECTIVENESS IN ASSURING THE TARGET PRODUCTION GOAL, BREADTH OF INDUSTRY PARTICIPATION AND COMPETITIVENESS, AND MINIMIZING FEDERAL MANAGEMENT INVOLVEMENT.

How do you determine how much incentive is needed?

ALL INCENTIVE LEVELS WILL BE DETERMINED BY COMPETITIVE BIDS FROM INDUSTRY.

Does the total production capability require additional support for industry growth?

ADDITIONAL MINES AND TRANSPORT SYSTEMS WILL CERTAINLY BE NEEDED. HOWEVER, FOR A 1,000,000 BARREL PER DAY PROGRAM, COAL CONSUMPTION COULD BE EXPECTED TO INCREASE ABOUT 15 PERCENT FROM THE CURRENT 625 MILLION TONS PER YEAR. SIMILARLY, IT IS EXPECTED THAT WHILE ADDITIONAL CONNECTING RAIL SPURS AND PIPELINES WILL BE NEEDED, THE EXISTING SOLIDS, LIQUIDS, AND GAS DISTRIBUTION SYSTEM WILL BE UTILIZED. A SEPARATE ANALYSIS WAS CONDUCTED FOR OTHER SUPPORTING RESOURCES SUCH AS PEOPLE, STEEL, AND WATER. THESE RESOURCES COULD ALL BE AVAILABLE WITH GOOD LEAD TIME PLANNING.

Is there a need for any new legislation?

YES. A FEW LEGISLATIVE CHANGES ARE NEEDED. THE PLAN INCLUDES RECOMMENDATIONS FOR:

- ESTABLISHMENT OF A LOAN GUARANTEE AUTHORITY
- POSSIBLE CHANGES TO OTHER EXISTING STATUTES SUCH AS:
  - AUTHORITY FOR DOI TO GRANT FEDERAL OIL SHALE LEASE HOLDERS OPTIONS CONCERNING SHALE RESIDUE DISPOSAL, AND
  - CHANGES TO THE NATURAL GAS ACT TO PROVIDE THE FPC WITH FULL REGULATORY JURISDICTION OVER SYNTHETIC GAS PLANTS. (IN EVENT NATURAL GAS IS NOT DEREGULATED).
- REGIONAL IMPACT ASSITANCE FOR FINANCING DEVELOPMENT IN REMOTE AREAS.

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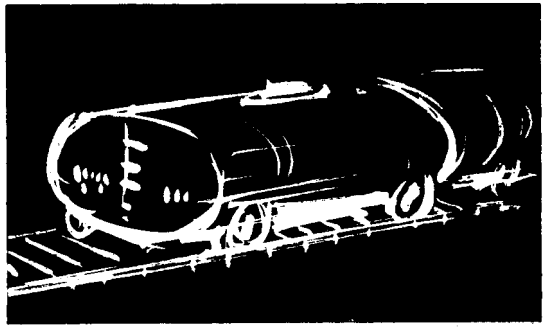


WHO WILL DO IT? - AT WHAT COST?

THIS PROGRAM WOULD BE CARRIED OUT BY AN INDUSTRY/GOVERNMENT TEAM WITH GOVERNMENT RESPONSIBLE FOR DETERMINING THE SIZE AND SCOPE OF THE PROGRAM AND INDUSTRY RESPONSIBLE FOR CONSTRUCTING AND OPERATING THE PLANTS.

THE COST OF THE PROGRAM TO THE TAXPAYER WILL DEPEND ON THE PRICE OF IMPORTED OIL. IF OPEC OIL PRICES CONTINUE TO RISE, THE PROGRAM MAY COST NOTHING; IF THEY FALL THE COST OF A 350,000 BARREL/DAY PROGRAM COULD BE $10-15 BILLION OVER 20 YEARS.

QUESTION: *What level of participation is needed from the federal government, the public, and the industrial sector to support the commercialization program? – Who will bear the costs?*

ANSWER: THE FEDERAL GOVERNMENT NEEDS TO ACCEPT THE LEGISLATIVE, FINANCIAL AND LIMITED MANAGEMENT RESPONSIBILITY TO ENCOURAGE INDUSTRY PARTICIPATION. THE FOLLOWING TABLES AND FIGURES SHOW THE RANGE OF FINANCIAL COMMITMENT FOR THE INITIAL 350,000 B/D PHASE OF THE TWO-PHASE 1,000,000 B/D PROGRAM.

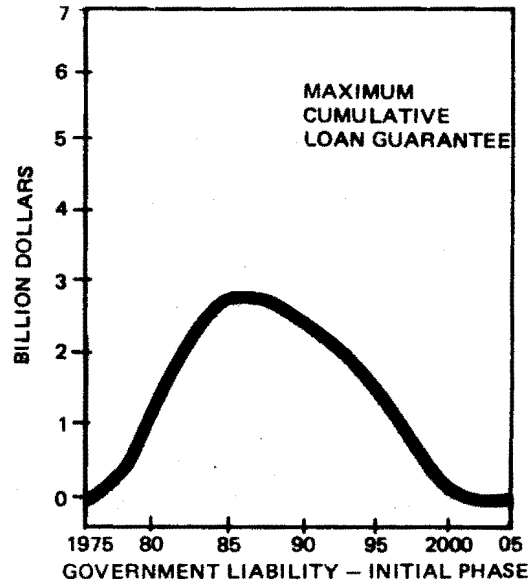
PRIVATE INDUSTRY SHOULD PROVIDE THE TECHNICAL AND MANAGEMENT EXPERTISE AND APPROPRIATE CAPITAL IN RESPONSE TO THE REDUCED RISK THAT THE COMMERCIALIZATION PROGRAM WOULD PROVIDE. THE SYNTHETIC FUELS PROGRAM CANNOT BE IMPLEMENTED IN A TIMELY MANNER BY SIMPLE SUPPLY/DEMAND MARKET FORCES.

As a general rule, energy conversion before use increases cost and should make synfuels less economical than just using oil, coal or natural gas. Why should the federal government now subsidize synthetic fuels technologies which are apparently uneconomical as evidenced by the fact that industry is unwilling at the present time to construct plants on their own?

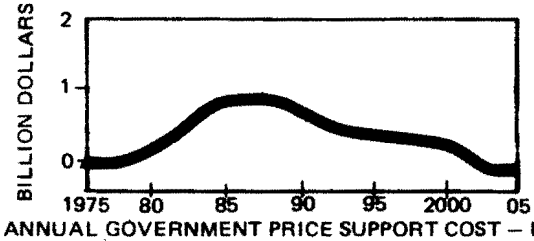
THERE ARE AT THE PRESENT TIME A NUMBER OF SERIOUS IMPEDIMENTS TO PRIVATE SECTOR COMMERCIALIZATION OF SYNTHETIC FUELS. THE UNCERTAINTY IN THE FUTURE PRICES OF WORLD OIL IS PERHAPS THE MOST IMPORTANT FACTOR DISCOURAGING PRIVATE INVESTMENT. IF THE WORLD OIL PRICES WERE TO FALL SUBSTANTIALLY, LARGE PLANT INVESTMENTS COULD NOT BE PAID OFF FROM REVENUES OF LOW PRICE, BUT HIGH COST, SYNTHETIC FUELS. IN ADDITION TO THE FINANCIAL RISK, THERE ARE NUMEROUS ENVIRONMENTAL UNCERTAINTIES, REGULATIONS THAT MUST BE MET, AND UNCERTAINTIES CONCERNING THE ADEQUACY OF AVAILABLE LABOR AND MATERIALS. FEDERAL GOVERNMENT INVOLVEMENT IS NEEDED TO OVERCOME THESE UNCERTAINTIES.

AT THE PRESENT TIME, U.S. OIL AND GAS COSTS ARE LESS THAN SYNTHETIC FUELS ALTHOUGH OIL AND GAS COSTS WILL CONTINUE TO RISE AS U.S. RESOURCES ARE DEPLETED. SYNTHETIC FUELS WILL BE NEEDED TO AVOID INCREASING U.S. OIL AND GAS IMPORTS AND SHOULD BECOME MORE ECONOMICAL THAN OIL AND GAS IN THE EARLY 1990'S. THUS, INITIATION OF A SYNFUELS INDUSTRY IS NOW NECCESSARY.

PROGRAM COSTS*



GOVERNMENT LIABILITY – INITIAL PHASE
(NOT REQUIRED FOR SUCCESSFUL PLANTS)



ANNUAL GOVERNMENT PRICE SUPPORT COST – INITIAL PHASE (DEPENDS LARGELY ON PRICE OF FOREIGN OIL)

*BASED ON EXPECTED INFLATED COSTS, AND ACCELERATED PROGRAM STARTS AS SHOWN ON PAGE 10

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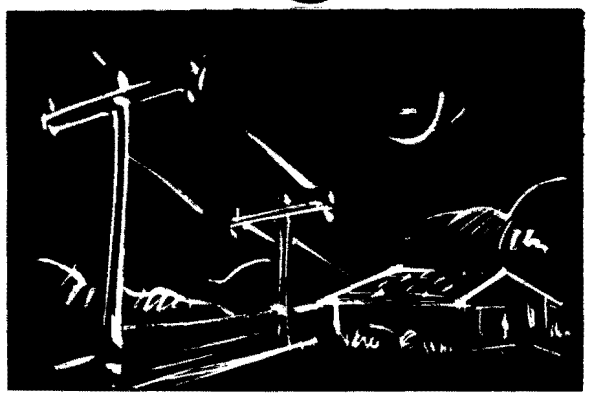

WHAT ARE THE PROGRAM'S POTENTIAL COSTS AND BENEFITS? WILL BENEFITS EXCEED COSTS?

- **THERE IS NO WAY OF KNOWING WHETHER THIS PROGRAM WILL BE COST-EFFECTIVE. FUTURE OIL PRICES AND THE COSTS OF SYNTHETIC FUELS ARE NOT COMPLETELY PREDICTABLE. IF THEY WERE, THEN NO COMMERCIALIZATION PROGRAM WOULD BE NECESSARY.**
- **ALTHOUGH NOT ALL BENEFITS AND COSTS CAN BE QUANTIFIED, THE PROGRAM'S BENEFITS TO THE NATION COULD EXCEED COSTS BY $15 BILLION* IF THE WORLD OIL PRICE CONTINUES TO RISE, IF SYNTHETIC FUEL PLANTS ARE EFFICIENT, AND IF A MAJOR SYNTHETIC FUELS INDUSTRY EMERGES AS A RESULT OF THE INFORMATION GENERATED BY THE PROGRAM.**

BENEFITS

- ECONOMIC BENEFITS, IF SYNTHETIC FUELS ARE INEXPENSIVE
- DECREASE IN FOREIGN OIL PRICE DUE TO LESSENED U.S. DEMAND FOR IMPORTS.
- REDUCED VULNERABILITY TO OIL IMPORT EMBARGOES.

COSTS

- ECONOMIC COSTS, IF SYNTHETIC FUEL COSTS EXCEED MARKET PRICES.
- ENVIRONMENTAL AND SOCIO-ECONOMIC COSTS OF ACCELERATED RESOURCE DEVELOPMENT.

*COSTS AND BENEFITS ARE IN 1975 EQUIVALENT DOLLARS, NET PRESENT VALUE, DISCOUNTED AT 10%.

QUESTION: *What are the key factors which influence the magnitude of the expected program costs and benefits?*

ANSWER: THESE RESULTS ARE HIGHLY SENSITIVE TO THE FOLLOWING FOUR FACTORS:

- THE ASSUMED STRENGTH OF THE CARTEL AND THUS THE FUTURE WORLD OIL PRICES
- U.S. ENERGY POSITION IN 1995 AS DEFINED BY THE DIFFERENCE BETWEEN DOMESTIC DEMAND AND PRODUCTION
- THE FUTURE COSTS OF SYNTHETIC FUELS
- THE EFFECTIVENESS OF THE PROGRAM IN REDUCING SYNTHETIC FUELS COSTS.

What are reasonable assumptions for the above factors and what is the magnitude of expected net benefits (benefits less costs)?

BASED ON PRESENTLY AVAILABLE INFORMATION CONCERNING FUTURE EXPECTED U.S. DEMAND AND DOMESTIC PRODUCTION, THE EXPECTED COST OF SYNTHETIC FUELS, AND ASSUMING THE OIL CARTEL HAS A 50-50 CHANCE OF REMAINING STRONG, THEN THE EXPECTED COSTS EXCEED THE EXPECTED BENEFITS. THE 350,000 B/D PROGRAM COULD BE EXPECTED TO COST THE NATION ON THE ORDER OF $1.6 BILLION IN DISCOUNTED 1975 DOLLARS. HOWEVER, THERE IS A 10 PERCENT CHANCE THE 350,000 B/D PROGRAM COULD RESULT IN A NET BENEFIT TO THE NATION OF MORE THAN $7 BILLION WHILE THERE IS A 10 PERCENT CHANCE IT COULD RESULT IN MORE THAN A $9 BILLION COST. THE 1,000,000 B/D PROGRAM COULD BE EXPECTED TO COST THE NATION ON THE ORDER OF $5.4 BILLION. HOWEVER, THERE IS A 10 PERCENT CHANCE THE 1,000,000 B/D PROGRAM COULD RESULT IN A NET BENEFIT OF MORE THAN $15 BILLION OR A 10 PERCENT CHANCE OF A NET COST OF MORE THAN $25 BILLION.

How is the desirability of the program affected by other parts of our emerging energy policy?

THE DESIRABILITY OF A LARGE SYNTHETIC FUELS PROGRAM IS HIGH ASSUMING IMPORTS ARE RESTRICTED, ALTHOUGH IT IS NOT STRONGLY INFLUENCED BY THE EXISTENCE OF A STORAGE PROGRAM. IF THE GOVERNMENT SHOULD ADOPT A SIX MILLION BARREL PER DAY IMPORT RESTRICTION THE 350,000 B/D PROGRAM WOULD HAVE AN EXPECTED NET BENEFIT OF $12 BILLION AND THE COMPARABLE 1,000,000 B/D PROGRAM BENEFIT WOULD BE $27 BILLION. HOWEVER, IN THIS CASE THE NATION WOULD INCUR A COST DUE TO SUCH IMPORT RESTRICTIONS ON THE ORDER OF $120 BILLION. A STORAGE PROGRAM OF BETWEEN 0.6 AND 1.0 BILLION BARRELS WOULD HAVE ALMOST NO EFFECT ON THE DESIRABILITY OF A SYNTHETIC FUELS COMMERCIALIZATION PROGRAM; HOWEVER, IT IS EXPECTED THAT SUCH A STORAGE PROGRAM WOULD PROVIDE A NET BENEFIT TO THE NATION OF ABOUT $7.0 BILLION.

What major factors were not included in the cost-benefit analysis?

NOT INCLUDED IN THE QUANTITATIVE ANALYSIS ARE THE FOLLOWING POTENTIAL BENEFITS THAT COULD ACCRUE TO THE U.S. AS A RESULT OF UNDERTAKING THIS PROGRAM:

- INTERNATIONAL LEVERAGE (IMPROVED BARGAINING POSITION) ASSOCIATED WITH POSITIVE U.S. LEADERSHIP IN DEVELOPING ALTERNATIVE FUEL SOURCES
- RESOLUTION OF INDUSTRY'S UNCERTAINTY WITH REGARD TO GOVERNMENT SUPPORT FOR SYNTHETIC FUEL DEVELOPMENT WHICH MAY SPEED PRIVATE SECTOR INVESTMENT
- THE VALUE OF A POTENTIAL DECREASE IN WORLD OIL PRICES PAID BY OTHER IMPORTING NATIONS; AND THE POSSIBLE WEAKENING OF THE CARTEL STRENGTH (THIS WAS ASSESSED AS NEGLIGIBLE).

How great is the risk that synthetic fuel technologies will fail?

MOST OF THE RECOMMENDED TECHNOLOGY HAS BEEN VERIFIED AT THE PILOT PLANT AND/OR DEMONSTRATION LEVEL, AND THE TECHNICAL RISK APPEARS SUFFICIENTLY LOW TO SUPPORT AN EARLY PROGRAM START. COMMERCIAL FACILITIES FOR PRODUCING SYNTHETIC FUELS FROM COAL WERE IN OPERATION IN GERMANY DURING WORLD WAR II. THERE ARE 16 COMMERCIAL PLANTS IN EUROPE AND AFRICA CURRENTLY MAKING MEDIUM BTU GAS BY THE KOPPERS-TOTZEK PROCESS AND THE LURGI PROCESS HAS ALSO BEEN APPLIED AT MULTIPLE SITES. THE UNCERTAINTY REGARDING WHETHER OR NOT THE PLANTS WILL FUNCTION IS MUCH SMALLER THAN THE UNCERTAINTY SURROUNDING THE COST OF OPERATION.

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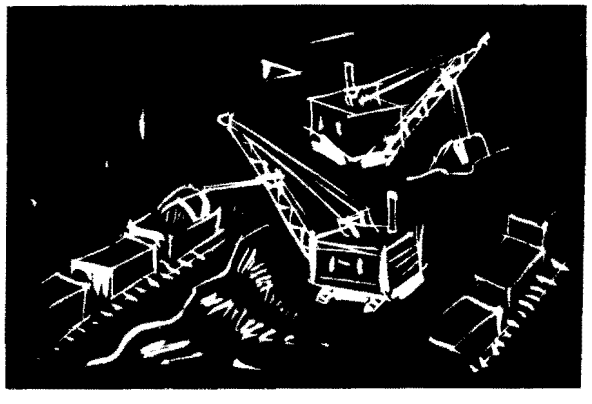


SOCIAL AND ENVIRONMENTAL CONSEQUENCES

THE SYNTHETIC FUELS COMMERCIALIZATION PROGRAM:

- COULD REDUCE THE CONSUMER COSTS OF FUELS IF WORLD OIL PRICES CONTINUE TO RISE
- WOULD CREATE NEW JOBS
- REMOVES SOME OF THE UNCERTAINTY IN SYNTHETIC FUEL COSTS

THERE WOULD BE SOME LIMITED ENVIRONMENTAL DAMAGE FROM UNDERTAKING THE RECOMMENDED PROGRAM. BUT, THE ENVIRONMENTAL RISKS CAN BE AMELIORATED BY CONDUCTING AND ANALYZING THE INITIAL PHASE OF THE PROGRAM (AT THE 350,000 B/D CAPACITY GOAL) BEFORE IMPLEMENTING A FULL 1,000,000 B/D GOAL.

THERE WILL BE SOME SOCIO ECONOMIC COSTS DUE TO EFFECTS ON REGIONAL LIFE STYLES, ALTHOUGH THESE CAN BE MINIMIZED IF PROPERLY PLANNED FOR.

QUESTION: *How will the program affect the economy in terms of recession and inflation?*

ANSWER: THE RECOMMENDED PROGRAM WILL CONTRIBUTE TO INCREASING EMPLOYMENT AND SPEEDING UP THE ECONOMIC RECOVERY. THE PROGRAM IS NOT SO LARGE, HOWEVER, THAT IT WILL CREATE UNFULFILLABLE DEMANDS FOR LABOR, EQUIPMENT OR SUPPLIES. THUS, INFLATIONARY PRESSURES WILL BE AVOIDED.

Will synthetic fuels mean higher prices for gasoline, heating oil, and natural gas?

IT SEEMS CLEAR THAT ALL ENERGY FORMS WILL COST MORE IN THE FUTURE THAN WE HAVE BEEN ACCUSTOMED TO PAYING. SYNTHETIC FUELS WILL BE NO EXCEPTION TO THIS GENERAL TREND. BY INCREASING THE ASSURED SUPPLY OF CLEAN AND CONVENIENT FUELS, HOWEVER, THERE WILL BE MORE ENERGY AVAILABLE AND IT MAY VERY WELL COST LESS THAN IF THE PROGRAM WERE NOT IMPLEMENTED.

What about the socio-economic effect of this new synfuels industry on the local lifestyles where new mines or new plants are built?

REGIONAL LIFESTYLES WILL BE AFFECTED. SOME SPARSELY POPULATED REGIONS WILL PROBABLY RECEIVE AN INFLUX OF PEOPLE WITH DIFFERENT VALUES. IT SHOULD BE NOTED THAT BOTH WESTERN AND EASTERN AREAS WILL EXPERIENCE NEW DIRECT JOB OPPORTUNITIES OF AT LEAST 30,000 BY 1985. THE RECOMMENDED PROGRAM WOULD PROVIDE FOR LIMITED REGIONAL IMPACT ASSISTANCE TO AID COMMUNITIES IN FINANCING NEW LOCAL INFRASTRUCTURE.

How will you protect the environment from possible harm due to increased mining and fuel processing plants?

FEDERAL, STATE, AND LOCAL REGULATIONS CONCERNING THE ENVIRONMENT, LAND USE, HEALTH AND SAFETY, THE USE OF PUBLIC LANDS AND MINERALS, ETC., WILL BE STRICTLY OBSERVED. ALSO AN ENVIRONMENTAL PROTECTION STRATEGY IS AN INTEGRAL PART OF THE RECOMMENDED PROGRAM. AN ENVIRONMENTAL ADVISORY PANEL WILL HELP GUIDE THE EVALUATION OF THE PROGRAM AND WILL KEEP WATCH OVER ITS ENVIRONMENTAL EFFECTS. EXTENSIVE ENVIRONMENTAL RESEARCH AND DATA GATHERING WILL BE CONDUCTED IN CONJUNCTION WITH THE IMPLEMENTATION OF THE PROGRAM.

How can a program be recommended whose environmental impacts are not completely known?

THE PROGRAM IS INTENDED TO RESOLVE ENVIRONMENTAL UNCERTAINTIES ABOUT SYNTHETIC FUELS. CONSIDERATIONS BY THE TASK FORCE LED TO THE RECOMMENDATION FOR A FIRST PHASE OF 350,000 B/D. A SINGLE PHASE 1 MILLION B/D APPROACH WAS ALSO REJECTED SINCE IT LOST THE OPPORTUNITY TO FEEDBACK NEW ENVIRONMENTAL KNOWLEDGE INTO THE LATER YEARS OF THE PROGRAM.

THE ENVIRONMENTAL UNCERTAINTIES INCLUDE CONCERN OVER EFFLUENT PRODUCTION, POLLUTANT EFFECTS, PLANT SITING, WASTES DISPOSAL, AND AESTHETICS. AN EXTENSIVE, THOUGH PRELIMINARY, ANALYSIS SHOWED THE NEED FOR IMPROVED EMISSION CONTROLS, MONITORING OF SUSPECTED TOXIC MATERIALS, MEASUREMENTS OF EFFLUENT WATER QUALITY, WILDLIFE PROTECTION, REVEGETATION AND RECLAMATION. THE ANALYSIS DID INDICATE THAT ENVIRONMENTAL CONTROLS COULD PROTECT SURFACE WATERS, THAT WATER SUPPLIES WOULD BE ADEQUATE IN THE PROBABLE DEVELOPMENT REGIONS, AND THAT WILDLIFE DISTURBANCE WILL BE SHORT-TERM. THE INITIAL PHASE OF THIS PROGRAM WILL ADD GREATLY TO UNDERSTANDING OF THE ENVIRONMENTAL EFFECTS AND SAFEGUARDS.

1. What, if any, analyses have been made of the capability of energy suppliers and/or users to construct demonstration facilities leading to the commercialization of synthetic fuels?

In the context of a recent Interagency Study on Synthetic Fuels which has been completed and is now undergoing final review, there have been extensive analyses of both the technical and financial capability of energy suppliers and/or users to construct commercial demonstration facilities for producing synthetic fuels. In the course of the task force study effort, most of the major synthetic fuels projects currently in some stage of planning were examined to determine their technical readiness and as well as their financing status.

It was concluded from these analyses, that from a technical standpoint, there are at a minimum three each of oil shale and high Btu gasification projects that are ready for commercial demonstration, as well as several other projects including low Btu gas and methanol. The financial picture, however, is much different.

In the case of high Btu coal gasification, all major projects are being proposed by regulated gas transmission or distribution companies whose financial assets are, in almost all cases, less than the estimated capital cost of the project. Because of the economic, regulatory and environmental uncertainties associated with bringing into operation first-of-a-kind synthetic plants, these utilities at present are unable to obtain needed financing for these projects.

In the case of oil shale, obtaining financing is not the problem. Although many of the companies interested in undertaking oil shale commercial demonstration projects are financially capable, these projects represent higher than normal risk and thus are less attractive investments than alternative investments, including non-energy investments. In addition to the uncertainties previously noted for coal gasification projects, oil shale investors are faced with the possibility of their product being seriously undercut in price if world oil prices fall and imports of oil into the United States are permitted to increase. Thus, the added financial uncertainty of the competition is also a factor.

Thus, in summary, the technical capabilities to construct synthetic fuels plants now exist in industry but the financial limitation coupled with Federal, state, local regulatory uncertainties are delaying commercialization efforts.

2. What, if any, effects will such loan guaranties have on the capital markets and other domestic energy alternatives which may be more economic?

Any type of Federal financial assistance, including loan guaranties, resulting in the undertaking of energy projects which would not have otherwise been undertaken will lead to some distortions in our capital markets. Such programs increase the demand for capital, while having little or no effect on the overall supply of capital.

However, the magnitudes of the adverse impacts will, of course, depend on the amount of money involved and the length of time over which the money is raised in the capital markets. The $6.0 billion in loan guaranties proposed in Section 103 of the Senate version of the ERDA Authorization Bill could directly result in up to a $9 billion investment over the next 10 years in synthetic fuel plants. Relative to the Nation's $200 billion (1974) annual investment rate or even compared to the mortgage, commercial, and industrial annual loan rate of about $80 billion (1974), the effect of a $6 billion loan guaranty program for synthetic fuels is small (an average of about $1 billion/yr. of investment) in relation to total capital investment and therefore not likely to have a major impact on the general cost or availability of capital. Even when compared to the average total annual capital investment in energy in the U.S. which is about $35 billion/yr., the capital investment arising from this program is not large.

It should be kept in mind, nevertheless, that about 50% of the $200 billion net flow of funds in U.S. credit markets is now being taken to finance existing Federal, State, and local programs. It is also clear that heavy governmental borrowing pressures will continue for a number of years to come and it is crucial that we minimize these pressures. It is our judgment, however, that synthetic fuels commercialization is an important enough effort for our national well-being that it is well worth the impact.

It is true that a loan guaranty program would divert some capital from other areas although not necessarily just other energy projects. Some diversion, however, would be intended since the objective of the loan guaranty program would be to attract additional capital into the energy sector in order to undertake the commercialization of domestic synthetic fuels. As domestic oil and gas are depleted and become more expensive to extract synthetic fuels will become directly competitive. The commercialization program and its associated incentives will have been completed by the time synthetic fuels are to compete favorably with domestic energy alternatives.

3. Do you intend that loan guaranties be used solely for construction of "one-of-a-kind technology" commercial plants, but not for support facilities that may be required, such as schools, roads, and other public facilities?

At present we intend that loan guaranties be provided for commercial demonstration plants that generally represent a unique technological approach or process in converting coal, oil shale and other domestic energy resources to synthetic fuels. By this definition, several oil shale plants or several gasification plants using different retorting processes and coal feedstocks could be constructed within the scope of the loan guaranties program. However, we do not believe that the program at this time should be used to finance large numbers of identical plants. We intend that the loan guaranty program initiate synthetic fuels production and not sustain an industry. It is our belief that after a number of synthetic fuels plants of different types are built and operated that the economic environmental and regulatory risks will be substantially reduced. This, in combination with greater certainty about future levels and prices of foreign oil imports should create an investment climate conducive to carrying on the industry without the need for government support.

With regard to the financing of schools, roads, and other public facilities, we do not intend that the loan guaranties proposed in the ERDA program authorization bill be used for this purpose. We anticipate that there would be some need for Federal assistance to regions and locations impacted by a synthetic fuels program, particularly in remote areas, but we believe there is sufficient authority currently in various areas for this purpose. We believe it is important to handle impact assistance separately in order not to confuse the purpose of this particular loan guaranty program.

4. How many facilities and of what size do you anticipate could be built with a $6 billion program?

The number of synthetic fuels facilities that could be financed with a $6 billion loan guaranty authority would depend on the size and type of plants selected, the percentage of the total construction costs that is guaranteed by the Government and the extent of other incentives offered in conjunction with loan guaranties.

The analyses undertaken by the Interagency Synthetic Fuels Task Force suggested that loan guaranty would be appropriate both for high Btu gasification plants as well as for oil shale plants. Although in the case of oil shale, price supports would probably be needed in addition to loan guaranties. If it is assumed that guaranties up to 75% of the project cost are offered for high Btu gas projects and up to 50% of the project cost for oil shale and other unregulated fuels than those estimated that $6 billion of loan guaranty authority would be adequate, in conjunction with other incentives such as price supports, to initiate a 350 thousand barrel per day (10-13 synthetic fuel plants) first phase of possibly a larger program. This estimate includes inflation and a contingency for unforeseen developments.

With respect to plant size, it is expected that commercial size high Btu gasification plants would be on the order of 250 million cu. ft. per day (approximtely 40,000 barrels per day of oil equivalent) and oil shale plants would be between 30 and 50 thousand barrels per day. Low and medium Btu gasification plants which would serve industrial and electric utility users would probably be on the order of half that size.

5. In view of the technical, regulatory, environmental, and other problems associated with oil shale and high Btu gasification development, do you anticipate that you would receive and approve any application for a loan guaranty in fiscal year 1976?

As you know, the ERDA authorization for 1976 would extend through the transition quarter until October 1, 1976. The schedule for initiating a synthetic fuels program envisioned by the Interagency Task Force holds, would provide for a Final Programmatic Synthetic Fuel Environmental Impact Statement and for final program guidelines by early 1976. At that time, request for industry proposals could also be issued. Site specific environmental impact statements could be in preparation by the early spring and final project selections could be made by mid-summer 1976. Thus, we would anticipate that commitments to guaranty could be made as early as the middle to late summer of 1976.

In any event, without an authorization for this program in this Congressional session, it is doubtful the loan guaranty program would be interpreted by the private sector as a credible initiative. Therefore, delays in authorization will simply result in delays in getting the program off the ground.

6. Should the guaranties be limited to lender of last resort situations? Should the guaranties be limited to U.S. citizens or Nationals and corporations substantially controlled by U.S. citizens and nationals?

We do not believe that a requirement that loan guaranties be limited to the lender of last resort is appropriate for synthetic fuels at this time. Unlike housing, ship building, and a number of other areas where there are eager participants but no lenders, some synthetic fuels ventures are not proceeding because of risks to the project proposers. Such risks include uncertainties concerning future competitive price of foreign oil imports, regulatory uncertainties and environmental clearances. In order to encourage industry to undertake a few selected synthetic fuels projects it will be necessary to provide a positive inducement. An excellent example of this situation is in oil shale where prospective industries do not have any problem raising equity or borrowing against their assets if they are convinced that the project would be profitable. In this case, it is not a question of not being able to find a lender, it is a question of the relative attractiveness of alternate investments including non-energy investments as compared with higher risks synthetic fuels investments. Thus, we believe it would be counter productive to the purposes of the loan guaranties program for synthetic fuels to limit participation only on the basis of not being able to secure a loan in the private capital markets.

With respect to the question of foreign control of companies seeking guaranties under the proposed program, we would not limit participation strictly to United States controlled companies. If a foreign company has synthetic fuels technology which is appropriate and desirable for demonstration on the commercial scale in the U.S., we believe that company should be eligible for the loan guaranty provided that the plant is built in the U.S., uses domestic resources and sells the product primarily for U.S. consumption.

We would suggest rather than providing specific limitations relating to foreign ownership in legislation that these matters be handled through the administrative regulations which would be promulgated by the Administrator of ERDA pursuant to Section 103 in the event it is adopted.

7. Should the loan guarantees be subject to the patent provisions (sec. 9) of the Federal Nonnuclear Energy Research and Development Act of 1974? Should the public information provisions (Sec. 107(e)) of the Energy Reorganization Act of 1974 apply?

Our understanding of Section 103 is that it would be carried out pursuant to the Nonnuclear R&D Act of 1974 as appropriate. It should be noted that a synthetic fuels program would involve, for the most part, the application of existing synthetic fuel technologies on a commercial scale. Most of the technology likely to be used has already been developed and currently exists. Many of the patents already exist. Extending loan guarantees would not necessarily constitute grounds for the U.S. taking title.

With respect to the public information provisions (Section 107(e)) of the Energy Reorganization Act of 1974, it is our position that they should apply as well as other applicable laws.

8. Should the loan guaranty authority be available for demonstrations of any new energy technology, including those utilizing (renewable) energy resources and those related to energy conservation?

We do not believe that a loan guaranty authorization should be available at the present time for any new energy technology including conservation and renewable energy resources, although we would agree that ERDA should have the organic authority for possible use at some future time. It is our view that the only emerging technology areas where a loan guaranty could be appropriate in the near future outside of the synthetic fuels program would be in geothermal and solar heating and cooling. In both of these areas a Federal program already exist. In geothermal, we already have a Congressionally authorized loan guaranty program and in solar heating and cooling the Congress and the Executive Branch have agreed to a phased cost shared demonstration program. In the case of conservation, we are not aware of any analysis which suggests that either loan guaranties are needed or that are the preferred incentive for stimulating the industry to adopt existing new technology. These reasons coupled with our estimate that the full $6 billion which would be authorized will be needed for synthetic fuels lead us to the conclusion that authorizations for loan guaranties beyond synthetic fuels are not appropriate or desirable at this time.

9. Would the provision concerning recourse in case of default in section 103(e)(3) of the Senate Amendment be included in the authority for loan guaranties?

Undertaking the commercialization of a new synthetic fuels, industry will entail major risks for the investor due to regulatory, economic, and environmental factors. The proposed loan guaranty incentive for commercial demonstration in Section 103 removes some of the burden of such risks from potential lenders and thereby reducing their exposure to risk. But the recourse provisions of Section 103(e)(3) need to be revised to provide flexibility to offer an incentive by sharing the risk with the entity established for the project as well as any parent or controlling corporate interest. Limiting the government's recourse to the assets of the synthetic fuel project excluding recourse to the assets of any parent entity would provide such an incentive while still ensuring ample assets at risk by the participants due to the limitation of 75 percent on the guaranty. The flexibility to limit recourse to the project assets will be necessary to attract project participants in two instances:

-- Companies with large assets and revenue flows have a wide range of low-risk investment opportunities both within and outside the energy sector. Although a recourse loan guaranty may reduce slightly project cost and provide capital to the point where the project participants are willing to provide 25% to 50% of the project cost, the guaranty would still obligate them to pay default costs out of parent company assets. Without flexibility to grant non-recourse loan guaranties to parent company assets but with recourse to project assets, the high-risk nature of these projects might well discourage competent and otherwise willing firms from participation. Such firms might be found in the oil, steel, and chemical industries.

-- Regulated gas utilities, the largest of which currently has net assets of only $565 million, appear willing to become project participants and provide some of the equity. But the assets of these utilities will not be adequate to cover the costs of default in the circumstances where the Federal Government has full recourse. Consequently, it is not only the utility investors that would bear the cost of default but also the utility customer. Public utility commissions are currently unwilling to place such a risk and open-ended burden on their rate payers. The flexibility to limit Federal recourse, in case of default to project assets and not the assets of any parent or controlling interest, would reduce the burden of the risk for these first-of-a-kind plants and permit broad utility participation.

SEP 9 1975

Honorable Ken Hechler, Chairman
Subcommittee on Energy Research,
Development and Demonstration
Committee on Science and Technology
House of Representatives

Dear Mr. Chairman:

We are pleased to respond to your letter of August 1, 1975, requesting our comments on Sections 102, 103, 301, and 306 of S. 598.

Section 102 would authorize and direct the Administrator in consultation with the Secretary of the Interior to select an appropriate tract of public land for the demonstration of production of oil from shale by in situ methods. Section 103 would authorize the conduct of a loan guarantee program for demonstrating the production of synthetic fuels from coal and oil shale, and for construction and operation of commercial facilities for producing synthetic fuel and deriving energy from "renewable sources" (e.g., solar, wind). The loan guarantee program would be conducted in cooperation with the Secretary of the Treasury. Section 301 authorizes the reprogramming of funds, with certain limitations (i.e., ten percent limitation on decrease of a program, notice to Congress on reprogramming actions). Section 306 would require the Administrator to submit a yearly report to Congress detailing the extent to which small businesses and nonprofit organizations are being funded and encouraged by ERDA.

We support the objective of Section 103. In our view, legislation confirming and clarifying authority for a loan guarantee program would be useful to ERDA in providing for construction and operation of commercial demonstration facilities for synthetic fuels. However, there are several serious problems with the Section in its present form. It is the view of the Administration that the Section should not include loan guarantee authority for "renewable energy sources." The desirability and appropriateness of this type of incentive have not been analyzed and generally established for "renewable energy sources" as provided in this Section. Furthermore, some of the authority in this Section already is available in the geothermal area under the Geothermal Energy Research, Development and Demonstration Act of 1974, and the Congress has already

expressed its preferred approach for accelerating the introduction of solar technology through the Solar Heating and Cooling Demonstration Act of 1974. In addition, many of the technologies for utilizing other renewable energy sources have not yet reached the stage of development where commercial quantities of power and heat could be economically generated by facilities suitable for loan guarantee support. Finally, the Department of the Treasury has found a number of technical problems with the detailed credit aspects of this Section relating to the need for greater compatibility with other Federal loan guarantee programs. We propose to submit to the Committee within the next few days a revised draft of Section 103 incorporating our recommended changes. Staff answers to your detailed questions on Section 103 are set forth in Attachment 1.

With regard to Section 102, both ERDA and the Department of the Interior believe that the additional program outlined in Section 102 is not necessary because of the prototype oil shale leasing program already initiated under the Mineral Leasing Act. In addition, the Section as drafted raises significant technical problems. Interior's detailed comments on Section 102 and answers to your questions on that Section are set forth in Attachment 2. ERDA staff answers to your questions on Section 102 are set forth in Attachment 3.

Section 301 concerning reprogramming procedures would present serious administrative problems in the management of our appropriated funds. A more detailed discussion of this Section by ERDA staff is in Attachment 4.

We also recommend deletion of Section 306 for the reasons set forth by ERDA staff in Attachment 5.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

/S/ Robert C. Seamans, Jr.

Robert C. Seamans, Jr.
Administrator

Enclosures a/s

OGC
RLForst/
RTJohnson:nsp
9/9/75

FEDERAL ENERGY ADMINISTRATION

WASHINGTON, D.C. 20461

STATEMENT BY FRANK G. ZARB
ADMINISTRATOR, FEDERAL ENERGY ADMINISTRATION
BEFORE THE
COMMITTEE ON HOUSE SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 25, 1975

Mr. Chairman and members of the Committee:

I am pleased to appear before you today to present the Administration's position on Synthetic Fuels Commercialization and more particularly Section 103 of the ERDA Authorization Bill, which pertains to loan guaranties. With me today is Robert Fri, ERDA's Deputy Administrator.

It is important in understanding the Administration's position on the loan guaranty provision to describe the relationship of our proposed synthetic fuels commercialization program to the overall energy development initiative announced by the President this past Monday in San Francisco.

As you know, the President has proposed a new $100 billion Government Corporation to work with private enterprise and labor to gain energy independence for the U.S. by 1985. The President proposed that the Energy Independence Authority have the power to provide financial assistance to accelerate the introduction of emerging energy technologies into the

U.S. energy supply system. One of the most important elements of the President's proposed energy independence initiative is a program to lead to the production by 1985 of 1 million barrels per day equivalent of synthetic fuels from coal, oil, shale and other domestic energy resources.

In proposing this new Energy Independence Authority, it was not the President's intention to halt or delay any important projects falling within its proposed scope. This is particularly true for synthetic fuels. Let me assure you, Mr. Chairman, that it's the President's expressed belief that the synthetic fuels program is an urgent National priority and that he desires to move forward now on the initiation of a synthetic fuels commercialization program in ERDA. Once the Energy Independence Authority is established, the synthetic fuels program can then be transferred to it in an orderly manner.

As most of you know, the Energy Research and Development Administration has most of the statutory authorities needed to initiate the synthetic fuels part of the President's proposed energy independence program. An essential financial incentive authority which is not vested in ERDA, at the present time, is the authority to provide loan guaranties. Thus, the Administration strongly supports

the $6 billion loan guaranty authority provided in the proposed Section 103. Bob Fri will shortly discuss the Administration's detailed views on the specifics of Section 103 as well as presenting the Committee an overview of how ERDA proposes to proceed in implementing this program.

Mr. Chairman, there has been an extensive effort over the past six months to develop and evaluate alternatives for a comprehensive and responsible program to encourage the private sector to initiate synthetic fuels production in the U.S. This effort has included a detailed examination of technical, economic, regulatory and environmental factors, the costs and benefits of each, alternative financial incentives which might be offered to encourage industry investment, as well as means for program implementation. Your Committee has the draft Interagency Task Force Report which describes these analyses and I can assure you that the Administration is willing to provide the Committee with whatever additional information we can in support of your important deliberations.

In moving forward in considering this program, I believe it is important that we actively solicit the input of the States. Pursuant to a request made by a group of interested and affected Governors, I have invited them to comment on The Synthetic Fuels Task Force Report, and have assured

them that, if received by the end of October, their views will be considered in formulating the final synthetic fuels program. In this connection, Governor Thomas P. Salmon of Vermont, Chairman of the National Governor's Conference Committee on Natural Resources has asked Governor Richard D. Lamm of Colorado to serve as Chairman of a National Governor's Conference Subcommittee on Synthetic Fuels to work with the Federal Government in this matter.

Finally, let me again emphasize that the President believes synthetic fuels commercial demonstration is an essential element of America's program for energy independence by 1985. He believes further that we need to move swiftly in ERDA to implement this historic program. I call upon you, Mr. Chairman, and all the members of the Committee and the Congress to act favorably on this unique opportunity and to move forward -- all of us working together -- to provide the necessary additional authority to initiate this important program this fiscal year.

Thank you, Mr. Chairman. We will be pleased to answer any questions either you or the members of the Committee may have.

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

STATEMENT OF
MR. ROBERT W. FRI
DEPUTY ADMINISTRATOR
U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
BEFORE THE
HOUSE SCIENCE AND TECHNOLOGY COMMITTEE

September 25, 1975

Mr. Chairman and Members of the Committee:

I am pleased to appear before you today on behalf of the Administration to present its views on Section 103 of the ERDA Authorization Bill which provides for loan guarantee authority for synthetic fuel and other commercial demonstration projects. In this regard I shall further explain the relationship of this authority to the President's proposed Synthetic Fuels Commercialization Program already discussed by Frank Zarb. Also with me today are Dr. S. William Gouse, Deputy Assistant Administrator for Fossil Energy and Mr. Leonard Rawicz, Deputy General Counsel.

Mr. Chairman, the President supports the prompt enactment of Section 103, with some changes, as an essential feature of a broad program to initiate the commercialization of synthetic fuels technology in ERDA.

This authority is needed to enable the Federal Government to offer a realistic range of incentives to private industry for an orderly development of synthetic fuels production. The synthetic fuels program, in turn, is designed to encourage the establishment of the industrial base necessary for the production of substantial amounts of clean-burning synthetic oil and gas from our domestically abundant supplies of coal, oil shale and other resources.

The Nation needs this program to reduce our reliance on imported oil and gas and to provide less expensive energy if world oil prices rise. Without such a program, imports of petroleum will continue to rise substantially even with increased production from the Alaskan North Slope, the Outer Continental Shelf, and from enhanced oil and gas recovery techniques. The President's Synfuel Commercialization Program will develop the basis for, and encourage the construction of commercial demonstration facilities necessary to launch a major American synthetic fuels industry.

We cannot expect the private sector to meet these needs without Government involvement. There are a number of serious obstacles discouraging private entry into this complex and

capital intensive field. Uncertainty in the future price of world oil is perhaps the most important factor discouraging private investment. If world oil prices were to fall substantially, large plant investments could not be paid off from revenues of low-priced but higher cost synthetically-produced fuels. Adding to this risk are uncertainties relating to environmental regulations, the complex economics of building full-scale synfuels facilities, and the adequacy of available labor and materials.

At the same time, it is clear that significantly reduced reliance on imported petroleum requires establishment of a major U.S. synfuels industry capable of production of about 5,000,000 barrels per day (equivalent) by 1995 and 10,000,000 by the year 2000. Because of the long lead times and technical complexities involved, this means we must begin now to establish the basis for steady growth of this industry in the 1980's and 1990's.

The Administration has had under study for some months a number of alternatives for launching an effective synthetic fuels commercialization program. A draft of this study has been made available to the Committee. The study forms the basis for the major initiatives contained in the President's Synthetic Fuels Commercialization Program.

Briefly stated, the President's program envisions an initial effort aimed at developing approximately 350,000 barrels per day of oil-equivalent capacity which could then be increased to 1,000,000 barrels per day by 1985. The initial level of 350,000 would provide essential information and data to clarify the many uncertainties surrounding the scale-up of the several processes likely to be used by the synfuels industry. This level of effort will minimize Federal risk while still providing the necessary magnitude and mix of synthetic fuels processes necessary for early assessment of the scale-up economics, the environmental and social issues, as well as overall industry response to the initial phase of the program. A sound information base will then be established for determining the best ways to proceed toward the 1,000,000 barrel per day goal by 1985.

The type of initial program envisioned can be seen by examining the anticipated start-ups from 1976 through 1978:

- For production of synthetic oil - 2 shale oil plants and 1 syncrude plants each producing 50,000 barrels per day

- For production of synthetic gas - 2 high-BTU gas plants each producing 40,000 barrels per day (equivalent)

- For production of electric utility and industrial fuels - 3 low and medium-BTU and boiler fuel plants each producing 25,000 barrels per day (equivalent) and 4 biomass conversion plants each producing 6,000 barrels per day (equivalent).

The environmental and social problems associated with a 350,000 barrel per day program will be of vital concern but should be fully manageable. Federal, state and local regulations concerning the environment, land use, health and safety, and the use of public lands and minerals must and will be strictly observed. To this end, an environmental protection strategy is included as an integral part of the recommended program. A draft programmatic environmental impact statement has been completed as an integral part of the proposed program. Extensive environmental research and data gathering will be conducted in conjunction with the implementation of the program. Health and environmental data and environmental control technology must be developed concurrently with the commercialization program. Adequate Federal funding for that purpose is necessary.

Environmental uncertainties include concern over effluent production, pollutant effects, plant siting, waste disposal, and aesthetics. An extensive, though preliminary, analysis has shown the need for improved emission controls, monitoring of suspected toxic materials, measurements of effluent water quality, wildlife protection, revegetation and reclamation.

Because there can be no assurance of adequate industry development in this time-frame without Federal encouragement, the President's program proposes a carefully selected mix of incentives designed to get the job done with minimal cost to the Government. The Administration believes that a realistic program of incentives should include authority in ERDA for loan guarantees, price supports and construction grants. For example, loan guarantees would be an attractive incentive for construction of regulated high-BTU synthetic gas plants. Also, loan guarantees in combination with price supports would make possible the construction of syncrude and shale oil plants in the private sector. And, construction grants may be needed to spur the construction of synthetic electric utility fuels subject to regulatory controls.

While we believe each of these incentives is needed to launch a successful synfuels industry in this country by 1985, we are here today to focus in detail on the loan guarantee authority as contained in Section 108 of the ERDA Authorization Bill. Additional legislation for the authorization/appropriation of price supports and construction grants will be transmitted to Congress shortly.

With specific regard to loan guarantees, the President's program recommends that the Government guarantee only a portion of loans for project costs. The percentage of the loan to be guaranteed would be established by open competition among potential participants. This procedure will reduce the taxpayer's risk should the project fail. By the same token, the Government would not spend any loan guarantee money if all the plants succeed. And, while the Federal loan guarantee authority that we are supporting permits participation by the Federal Government up to 75 percent of the total project costs, utilization of the full amount would be permissive, not mandatory.

In addition, to meet the needs of this program, we recommend the following major changes to Section 103 of the loan guarantee provision of S. 593 as passed by the Senate:

- Provisions authorizing loan guarantees for facilities deriving energy from renewable sources should be deleted.
- Clarifying language should be added which would establish that this Section authorizes loan guarantees for commercial scale facilities where such facilities are for such demonstration purposes.

- Modifications to the "recourse" provisions which could be used in case of default to insure that the assets of the parent company would not be at risk and only the assets of the project involved could be taken by the Government.

- An extension from 90 days to 180 days for ERDA to submit a report to the Congress on its recommendations for this program.

- A reduction in the time from 90 to 30 days that a report on each loan guarantee must be presented to Congress before a guarantee can be finalized.

- A provision which permits the Government to make immediate payments in the event of the default of a guaranteed loan.

- Finally, a number of technical changes are recommended, such as, prohibitions against loan guarantees for tax-exempt entities, authority to charge fees, a time limit for the loans which may be guaranteed, and a designated period in which ERDA may exercise this authority.

These and other proposed modifications are incorporated in our suggested language changes for Section 103 which I would like at this time to submit for the record. We will be glad to explain them in further detail and render any assistance the Committee desires.

While we must design the loan guarantee authority with the possibility in mind that not all synfuels projects will be successful, the actual probability of such failure is considered to be low since the technology that is likely to be employed has been verified at the pilot plant and/or demonstration scale. Indeed, commercial facilities for producing synthetic fuels from coal were in operation in Germany during World War II. There are 16 commercial plants in Europe and Africa currently making medium-BTU gas. Production of high-BTU gas has also been achieved at multiple sites. The technical uncertainty regarding whether or not the plants will operate satisfactorily is much smaller than the uncertainty surrounding future world oil prices, policies regarding imports, delays in construction, and environmental problems. Synfuel plants have never been built at the scale or size required by the demands of our present situation. Thus, this commercial-size demonstration program is essential to the resolution of uncertainties of these first-of-a-kind plants.

* * *

In summary, Mr. Chairman, we have been working many months to determine what needs to be done to accelerate the essential development of a synthetic fuel capability in the United States. The program Mr. Zarb and I have reviewed for you this morning is the product of that effort. We believe the program will:

- Intitiate a U.S. synthetic fuels industry by:
  - -- Demonstrating available and forthcoming technology at a commercial scale, and
  - -- Gaining early environmental, economic, institutional and technical information on large-scale plants;

- Increase domestic energy production and thereby:
  - -- Reduce reliance on energy imports,
  - -- Produce less expensive supplies if world oil prices continue to rise;

- Improve the U.S. international position in energy matters by:
  - -- Demonstrating U.S. capability to tap its vast resources, and
  - -- Establishing U.S. technological leadership in synfuels production among energy consuming nations;

- Provide answers to the non-technical problems associated with synthetic fuels so that commercialization can be at the required level by 1985 as ERDA's research and development program moves the technology forward into the 1990's.

- Provide a selective mix of financial incentives primarily in the areas of loan guarantees, price supports, and construction grants necessary to assure a significant thrust by the private sector toward achievement of 1,000,000 barrels (equivalent) of synthetic production in 1985 and even greater expansion in the 1990's.

The Congress will soon receive the additional proposed legislation needed for this program. But loan guarantee authority is before you now, and it has passed the Senate. We need this authority to mount an effective synthetic fuels commercialization program. We urge you to seize this opportunity at this time and place, to enact this authority in ERDA so that we may proceed with launching this vital national effort.

Thank You. My colleagues and I will now be glad to respond to any questions you may have.

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

STATEMENT BY ROBERT FRI
DEPUTY ADMINISTRATOR, ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
BEFORE THE
SUBCOMMITTEE ON ENERGY, RESEARCH, DEVELOPMENT AND DEMONSTRATION
(FOSSIL FUELS)
COMMITTEE ON SCIENCE AND TECHNOLOGY, U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 29, 1975

Mr. Chairman, and Members of the Committee:

I welcome this further opportunity to discuss with you the President's proposed Synthetic Fuels Commercialization Program, its relationship to ongoing fossil energy programs in ERDA, and to legislative proposals now before this Committee.

Before addressing these points, I again want to emphasize the importance the President attaches to rapidly initiating in ERDA an effective program for commercial demonstration of synthetic fuels technologies. I also want to stress his strong desire for early passage of the loan guaranty funding authorization as part of the FY 1976 ERDA Authorization Bill.

Mr. Chairman, pursuant to your letter requesting our appearance today, we have attached to this statement written answers to your five specific questions. In addition to those questions, there is one general issue raised in your letter on which I would like to comment now. That is the

relationship of the proposed Synthetic Fuels Commercialization Program to ERDA's ongoing fossil energy research, development and demonstration program.

As you know, ERDA's fossil energy R&D and demonstration plant program is aimed at developing second-generation technology. Demonstration plants currently envisioned under this program will be about one-fourth of the projected size of future commercial plants. Thus, these demonstration plants are neither required nor expected to be economically viable facilities, but are designed to test new technological approaches.

By contrast, the proposed Synfuels Commercialization Program is directed at initiating a limited number of plants, which will largely utilize present-day technology to produce commercial quantities of synthetic fuels. These plants would be used to gain valuable economic, environmental, regulatory and institutional data, most of which is applicable to widespread commercialization of both first and second generation technologies.

The Synthetic Fuels Commercialization Program, which will lead the schedule of the second-generation fossil demonstration plant program by about 1-2 years, will enable early identification and resolution of many of the operational and related problems associated with the initiation and growth of a new industry. These potential problems include: controlling and

operating of large numbers of similar process units within a given plant; understanding and scheduling the maintenance requirements of such facilities; mining, conveying and processing at a single site large amounts of coal, possibly originating at different mines; characterizing and controlling pollutants and wastes in accordance with existing and new standards; developing a knowledge base relative to the many potential occupational health and safety problems; developing industry infrastructure with appropriate design and construction capabilities and experience; training operating and maintenance personnel; and developing programs for dealing with the potential local social, governmental, service and educational problems resulting from the relatively sudden influx of plant personnel. In addition, the Synthetic Fuels Program will, unlike a demonstration program, force consideration of and development of local solutions to institutional problems such as plant siting, water allocations, competing land use requirements and product pricing policies.

It is expected that some commercial plants ordered during the second phase of the Synthetic Fuels Program (about 1979-1980) could be based on the second-generation technology that appears ready to progress beyond the pilot and demonstration phase. Because efficiency levels of the second-generation technologies will be from 20-25 percent higher than present-day technology, adequate incentive should exist to implement newer processes at commercial scale when they are available.

In summary, it is apparent that ERDA's ongoing fossil energy research, development and demonstration program and the proposed Synthetic Fuels Commercialization Program are well matched with respect to both timing and overall contribution to attaining possible future required levels of synthetic fuels production. The Synthetic Fuels Program can provide the initial commercial production and make inroads toward the solution of non-technical problems associated with the establishment of the industry, while the demonstration plant program will provide the basis for significantly improved synthetic fuel process technologies.

Mr. Chairman, in closing my prepared statement, I want to also indicate we are also prepared to discuss today the details of our recommended changes to the loan guaranty Section 103 of the Senate - passed ERDA Authorization Bill, as well as the provisions of H.R. 9723 which you introduced.

Finally, I would like to indicate to the members of the Committee and the staff that we are prepared to provide briefings and as much other supporting material on the President's proposed Synthetic Fuels Commercialization Program as the Committee may desire.

Thank you, Mr. Chairman. I will be pleased to address any questions either you or the members of the Committee may have.

QUESTION A

How does ERDA expect the acceleration of the development of synthetic fuels from coal using first generation technology to stimulate commercialization of synthetic fuels by 1985?

ANSWER A

Stimulating wide commercialization of synthetic fuels after 1985 utilizing second generation coal conversion technologies will require gaining early information on environmental and a variety of other factors as well as developing the industry infrastructure needed for a major expansion.

With regard to gaining information, the program will provide an effective mechanism for examining environmental, economic, institutional, technical, regulatory, and other factors associated with commercialization of synthetic fuels operations. Until industry gains a better understanding of the nature and severity of these potential constraints, wide commercialization of synthetic fuels will not be possible. It should be emphasized that most of the information to be gained from this program is common to first and second generation coal conversion technologies. By building a limited amount of first generation technology now, this information can be widely available in the early 1980's when second generation technology is beginning to be demonstrated.

Since a large synthetic fuels industry is projected as needed in the 1990's, then it is also important that industry gain needed construction and operating experience in the 1980's in order that it develop the necessary manpower and technical expertise and base for future rapid expansion.

In summary, the synthetic fuels commercialization program will provide the vehicle for gaining the needed information and experience so that large synthetic fuels production in the 1990's will be a possible option for the U.S. in reducing its requirements for foreign petroleum and gas imports.

QUESTION B

What are the socioeconomic, technological, regulatory, environmental, manpower, health and safety, and other constraints to building and operating such plants; and how can they be overcome or mitigated?

ANSWER B

General

Synthetic fuel plants face many of the same constraints as other major industrial processing facility. Such facilities must meet acceptable economic, environmental, social, health and safety and technical performance standards to be successfully built and operated by the private sector. Synthetic fuel plants have been operated in a number of countries throughout the world. The technology for such plants is not new. With the recent sharp increases in the world price of oil, and the growing dependence of the U.S. on foreign energy supplies, the prevailing economic and other strategic conditions now appear to favor the building of commercial scale plants. A number of synthetic plan proposals have been advanced by different companies but have not reached the construction phase for various reasons including: future uncertainties in the market price of fuels, the hugh dollar investment required to build such plants, and other regulatory uncertainties. To overcome these basic constraints and to deal with numerous other regulatory and social impacts, the Administration's program for synthetic fuels commercial demonstration plant includes:

- financial incentives to the private sector in the form of loan and price guaranties and grants for overcoming economic uncertainty;

- an environmental analysis and protection strategy designed to assure compliance with standards and to minimize impact; and

- an administrative effort and resources to expedite obtaining necessary regulatory permits and clearances.

Individual constraint areas are summarized in the following. It should be recognized that each area of constraint has been analyzed, assessed, and discussed in more detailed in the Interagency Task Force on Synthetic Fuels (Volumes I-IV). Appropriate references are included to this report.

1. Financial/Economic Constrants

A major limitation to achieving a viable synthetic fuels industry in this country is economics and financing to be successful in the longer term synthetic fuel prices will have to be competitive with other fuels. Cost estimates for synthetic fuels are generally higher than costs for conventional energy sources. However, in the past year or two the price of convention energy supplies has increased dramatically and is expected to continue to increase at a significant rate as easily obtainable energy resources are depleted. In contrast, there is good reason to believe that synthetic fuel costs will become more competitive once some commercial scale experience is achieved and as the "first generation" technology is improved. These changing price relationships are described in detail in Volume II of the Synthetic Fuels Task Force Report.

Uncertainty associated with future market prices of energy coupled with the technical/economic/regulatory uncertainty for commercial scale synthetic fuel plants has created considerable doubt in the minds of potential investors causing reluctance to invest in synthetic fuel plants. Without capital such plants cannot be built.

To overcome the problem of nonavailability of capital, the President's program of financial incentives has been proposed the incentives are tailored to the affected industries and the types of synthetic fuels involved. The recommended incentives are described in Volume I, Chapter V and Volume III of the Task Force Report.

2. Technology

The probable technologies to be employed in the commercial demonstration program by the private sector has been verified at the pilot plant and/or demonstration scale or by commercial operation in other countries. Commercial facilities for producing synthetic fuels from coal were in operation in Germany during World War II. Over a dozen commercial facilities in Europe and Africa are currently operating. Similarly, oil shale development in the United States has proceeded through the demonstration phase. A semi-commercial plant based largely on United States technology has been built and is now operating successfully in Brazil. Synthetic fuel plants have never been constructed at the scale and size required for

commercial operations in this country for these technologies; thus, technologic constraints are important, but we believe can be resolved through sound engineering that would draw upon the world-wide base of experience that has already been established. For more detailed information on technology availability refer to Volume I, Chapter IV and Volume III.

3. Environmental and Other Regulatory Constraints

The environmental uncertainties include concern over effluent production, pollutant effects, plant siting, wastes disposal, and aesthetics. An extensive, though preliminary, analysis showed the need for improved emission controls, monitoring of suspected toxic materials, measurements of effluent water quality, wildlife protection, revegetation and reclamation. The analysis did indicate that environmental controls could protect surface waters and that water supplies would be adequate in the probable development regions. The initial phase of this program will add greatly to understanding of the environmental effects and safeguards.

The proposed program has been designed to assure protection of the environment and to mitigate any impacts. Federal, State, and local regulations concerning the environment, land use, health and safety, and the use of public lands and minerals will be strictly observed. Also an environmental protection strategy is an integral part of the recommended program. An environmental advisory panel will help guide the evaluation of the program and will keep watch over its environmental effects. Extensive environmental research and data gathering will be conducted in conjunction with the implementation of the program. Volume I, Chapter 6 summarizes environmental considerations, Volume IV contains a draft comprehensive environmental analysis. Volume I, Chapter 7, Section C includes a specific strategy for environmental protection.

With regard to other regulatory requirements, an analysis shows that a considerable number exist at the Federal, State and local levels. At the Federal level, 16 statutes were identified as having a potential impact on the construction and operation of synthetic fuel plants. (Refer to Volume I, Chapter IX.) Regulation areas include price, land use, environment, competition, health and safety, resources (coal, water). Similar requirements tend to exist

at State/local levels as well. Overall a hugh regulatory burden must be dealt with to build and operate synthetic fuel plants.

4. Socioeconomic and Manpower

Projected labor requirements for commercialization would necessitate population shifts and could result in rapid rates of growth for affected rural areas. If the incremental rates of growth were significantly large, adverse impacts could occur in areas where: the original population base is small, local unemployment is low, excess capacity of existing infrastructure is minimal, and more than one energy development is located. These adverse impacts include housing shortages, disruption of the labor market, inflation, income redistribution, and high incidence of social problems.

Rapid growth rates would also present states and localities with financing and fiscal problems if:

- additional tax revenues from new industry and residents lag infrastructure expenditures by 2-5 years;
- statutory constraints limit their access to the bond market;
- appropriate severance or production taxes are not in place in time;
- mechanisms to share taxes equitably between impacted jurisdictions are lacking; and
- the bond market does not respond adequately because of perceived extraordinarily high risks.

For projects located on Indian Reservations, the traditional sources of financing public infrastructure may be limited or non-existent, thus requiring significant industry participation in the provision of infrastructure.

QUESTION C

How will the information and technical data resulting from demonstration of first generation technology at a commercial-scale be transferred to others in order to encourage more plants and competition?

ANSWER C

The fundamental purpose of the President's Synthetic Fuels Commercialization Program is to provide incentives to the private sector to begin building a synthetic fuels industry. The commercial demonstration program is based on using existing technology to build the initial plants in securing technical, environmental, and economic information on such plants. As commercial feasibility is proven, then widespread commercialization (building of additional plants) would be encouraged. To accomplish this, necessary information not related to specific patents will be made available at a reasonable cost to other firms interested in building such plants in this country. Information relating to patents employed in the various plants will be made available through normal licensing practices. ERDA would make such licensing a condition precedent to providing financial incentives.

QUESTION D

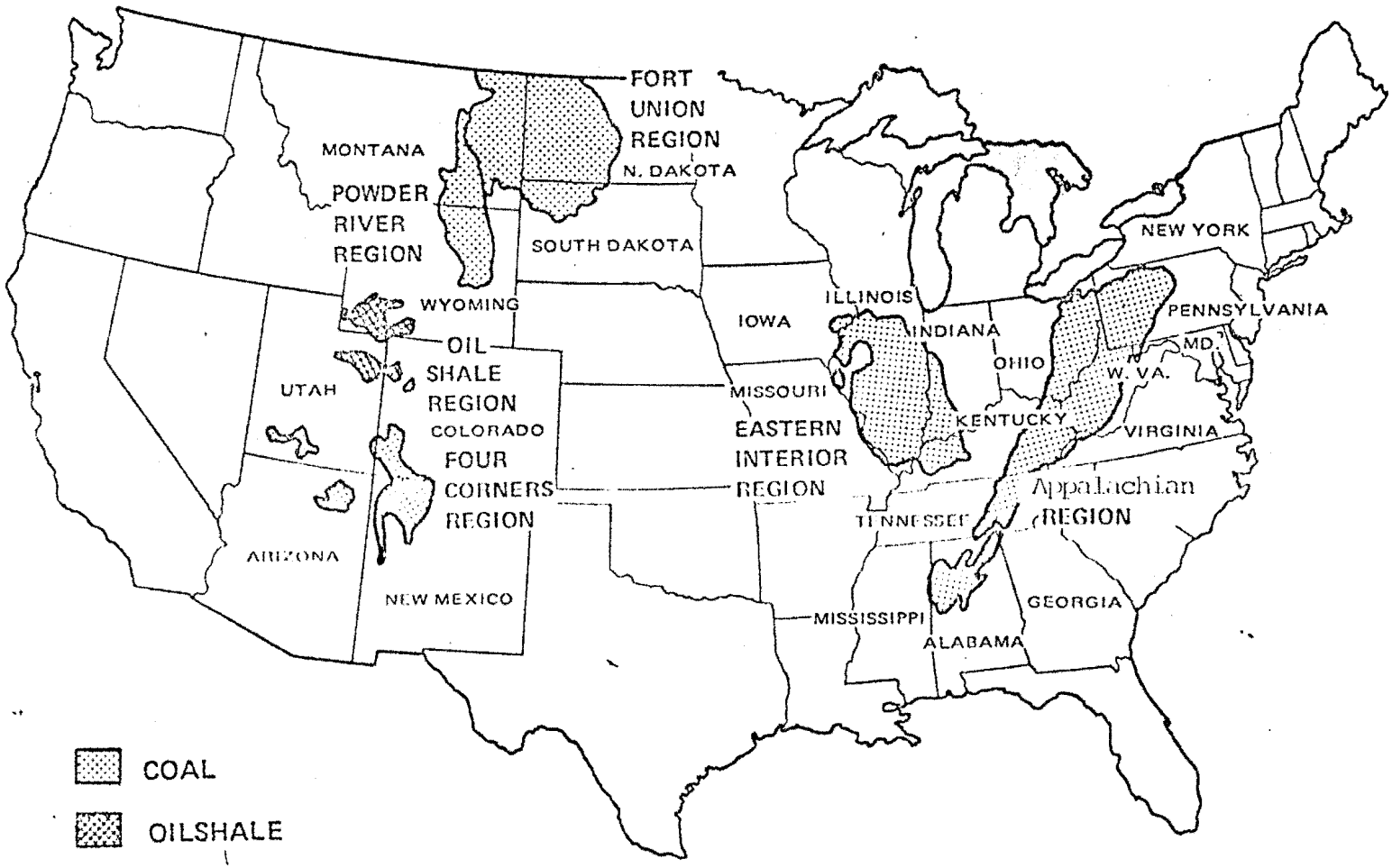
Where are these plants planned to be located, and what are the plans for coal mining in connection with these plants?

ANSWER D

The attached figure shows the five major coal producing regions and the principal oil shale region which were judged to be the most likely areas to contain one or more synfuels plants by 1985. The preliminary draft environmental impact statement (Volume IV of the Synthetic Fuels Task Force Report) presents a comprehensive description of the environments within these regions and an analysis of the possible impacts. Specific sites within these regions have not been selected at this time. Site selection would occur as the program proceeds, based upon nominations by the private sector and following the criteria published by the Government in accordance with the proposed environmental protection strategy.

Specific numbers of plants have not been allocated to the various regions. In order to analyze the aggregate environmental impacts of the commercialization program, the draft EIS examines six alternative industry compositions, each of which produces 1 million barrels per day of oil equivalents. This level reflects the conservation approach taken in the EIS of examining the full impacts of the two-phase program.

Three alternative industry compositions emphasize (respectively) high-btu gas, liquid fuels, and utility/industrial fuels, all generated at the mine mouth; three other compositions have the same product mixes but a substantial fraction of the conversion is performed in urban centers. These six mixes are considered likely to bracket the probable outcomes of the synfuels program. The plants implied by these compositions are then further allocated to the five regions for the purposes only of analyzing the environmental impacts.



COAL-OIL SHALE STUDY REGIONS

1985

QUESTION E

What other types of incentives are or may be needed to carry out this program?

ANSWER E

In addition to the loan guaranties, price guaranties and grants will be needed to carry out the 350,000 barrel/day first phase of the Synthetic Fuels Commercialization Program.

As previously indicated, the incentive recommended for High BTU (pipeline quality) gas from coal is a competitively awarded loan guaranty for up to 75% of the total project cost. The primary impediment to initiating High BTU gasification projects has been the inability of the project sponsors to obtain necessary financing. This is because of the large investments required, the relatively small assets of the project sponsors (i.e., regulated gas pipeline companies) and the risk associated with first-of-a-kind plants which have never been built at commercial scale in the U.S. Since all of the major components of these plants have been tested at commercial scale, the largest risks are associated, not with technical uncertainties, but with regulatory and other non-technical factors affecting timely construction and plant operation. Because regulated industries do not face future market price uncertainties due to assurance of cost recovery in the rate structure, price guaranties are not necessary or appropriate.

In addition to loan guaranties, the initiation of projects to produce oil shale and industrial fuels in an unregulated environment, would require some price guaranties. These are necessary for a limited number of plants because of the large plant investments and the uncertainty in the future price of world oil. If world oil prices were to fall substantially,for an uncertain, even though a short period of time, large plant investments could not be amortized from revenues from synthetic fuels which would have to be priced below their production cost. Thus, for unregulated industries which are not provided a guaranteed rate of return, it will be necessary to initiate a limited number of plants to provide some guarantee of price until such time as the U.S. policy toward reduced imports becomes established or there is greater certainty in the long-term future world oil price. It should be emphasized that as with the loan guaranty the price guaranty incentive would be awarded on a competitive basis in order to ensure that the Federal Government provides a guarantee at the lowest possible price. Also, it should be noted that in the event that the world oil price rises above the agreed to guarantee levels, the government would share in the additional revenues.

The third major incentive that will be needed for regulated electric utilities is a grant for part of the project cost for synthetic fuels plants. As with loan guaranty and price guaranty, this incentive would be awarded on a competitive basis. It is concluded that for the electric utility industry which has had severe financing problems in the past several years, that a construction grant is the most effective mechanism for initiating a limited number of synthetic fuels projects. This incentive is recommended primarily because many utilities could not make use of direct Government loans or loan guaranties because they have already reached their maximum allowable (by law) debt/equity ratios. The grant incentive provides a vehicle, therefore, for making front-end capital available to the regulated electric utility industry.

In summary, it should be emphasized that the financial and other impediments that are currently preventing the initiation of synthetic fuels ventures are significantly different in each of the three major sectors of regulated gas utility, regulated electric utility, and the unregulated industry. The recommended incentives have been designed to overcome existing contraints at minimum cost and risk to the Federal Government while providing some degree of risk sharing on these first-of-a-kind commercial scale synthetic fuels demonstration projects.

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

OCT 1975

Honorable Olin E. Teague, Chairman
Science and Technology Committee
House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

It is my pleasure to inform you that the Administration has withdrawn its objection to that provision in section 103 of the Senate-passed bill, S. 598, relating to the establishment of loan guarantee authority for the so-called renewable energy sources.

The Administration now supports the establishment within the Energy Research and Development Administration of authority to guarantee loans for "...facilities to generate power or heat in commercial quantities utilizing as their energy source direct solar, wind, ocean thermal gradient, bioconversion, or geothermal resources..."

We have, as you are aware, presented the Administration's views to the House Science and Technology Committee on changes in the Senate language we would prefer which would facilitate the administration of the loan guarantee programs. We are prepared to testify further on this subject should you so desire.

Sincerely,

R. C. Seamans

Robert C. Seamans, Jr.
Administrator

cc:
Honorable Charles A. Mosher
House of Representatives

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

October 9, 1975

CONGRESSIONAL BRIEFING/INFORMATION PROGRAM FOR SYNFUELS

On the assumption that the legislative proposals associated with the SynFuel Commercialization Program will be delivered to the Congress just prior to or during the Recess (October 11-20), the following plan is proposed to ensure that the Congress is fully informed as to the details of the President's proposal(s).

Briefings (The OMB Overview Briefing):

Senate Interior Committee and Senate Interior Appropriations Subcommittee staffs: October 10, 1975
House Science & Tech. Committee and House Interior Appropriations Subcommittee staffs: October 16 or 17.
House Science and Technology Committee (Full Committee Briefing): October 23 or 24.
House Majority and Minority Leadership - week of October 27.
House Republican Conference - week of October 27.
House Democratic Caucus(Steering & Policy Committee) - week of October 27.

Individual Contacts: (* indicates Conferee)

Chairman Teague *		Mosher (Ranking Minority)*
Hechler*	Hayes	Bell *
Downing*	Harkin	Jarman
Fuqua*	Lloyd (Ca.)	Wydler
Symington *	Ambro	Winn
Flowers*	Dodd	Frey
Roe	Blouin	Goldwater *
McCormack *	Hall	Esch
Brown *	Krueger	Conlan
Milford	Lloyd (Tenn)	Ketchum
Thornton	Blanchard	Myers
Scheuer	Wirth	Emergy
Ottinger		Pressler
Waxman		

Starting with the Conferees, each Member of the Committee will be visited and an offer made to discuss the program and respond to any questions/concerns the Member might have. These meetings will be conducted by ERDA OCR and appropriate program staff personnel.

At the conclusion of the Committee's present round of hearings, senior ERDA, FEA, OMB and White House officials will call each of the Conferees to ensure that all the concerns or questions have been fully resolved.

In addition to the above, the President is sending a letter to either the Chairman and Ranking Minority Member or to all Conferees stressing his firm support for this program and the need to seize this opportunity to get the program moving.

Almost hourly contact is being maintained between ERDA OCR and the HS&T staffs. Almost daily contact is being maintained with certain of the Committee members, all to ensure, to the extent possible, that the Committee's desires are known within the Executive Branch and that the President's plan is fully known by the Members as it evolves.

A copy of the hearing schedule before the HS&T Committee and its subcommittees is attached for your information.

H. Hollister Cantus, Director
Office of Congressional Relations

Distribution: (Please circulate as appropriate)

Dr. Seamans
Mr. Fri
Dr. White
Dr. Gouse
Mr. Johnson
Mr. Rawicz

FEA - Mr. Cyr
OMB - Dr. McCormick
WH - Mr. Leppert

HOUSE SCIENCE & TECHNOLOGY, SUBCOMMITTEE ON ENERGY RESEARCH, DEVELOPMENT & DEMONSTRATION (FOSSIL & NON-FOSSIL) WITNESS LIST AT HEARINGS DEALING WITH SYNTHETIC FUELS

OCTOBER 9 (McCormack)

Mr. Bruce Wiesley, Senior Vice President, American Can Company

Mr. E. Deane Turner, partner, Dewey, Ballantine, Bushby, Palmer & Wood

Mr. Peter Saint Germain, Managing Director, Morgan Stanley & Company

Mr. Frederick D. Lorey, Director of Melting Technology, Corning Glass Works

OCTOBER 9

Mr. William C. Rogers, Chairman, Oil Shale Environmental Advisory Panel, Interior Department

Mr. John S. Gilmore, Senior Research Economist, Industrial Economics Division, Denver Research Institute

Dr. James L. Liverman, Assistant Administrator for Environment & Safety, ERDA

Dr. Steven J. Gage, Acting Deputy Assistant Administrator, Office of Energy, Minerals and Industry, EPA

OCTOBER 8

Charles H. Brown, Senior Vice President, The Oil Shale Corporation. (Accompanied by Dr. John A. Whitcombe, Executive Vice President, R&D.)

Dr. Richard D. Ridley, Manager of Operations & Executive Vice President, Occidental Oil Shale, Inc.

Mr. Russell Cameron, Cameron Engineering

OCTOBER 7

Mr. Jack Horton, Assistant Secretary for Land & Water Resources, Interior Department

Dr. S. William Gouse, Assistant Administrator for Fossil Energy, ERDA

Mr. Robert W. Long, Assistant Secretary for Conservation, Research, & Education, Department of Agriculture

Mr. H. Tyler Marcy, Assistant Secretary for Navy R&D, Department of the Navy

SEPTEMBER 29

Mr. Robert Fri, Deputy Administrator, ERDA

Mr. Leonard Raviez, Deputy General Counsel, ERDA

Mr. [illegible] Johnson, Assistant Administrator for Fossil Energy, ERDA

SEPTEMBER 25

Mr. Frank Zarb, Adminstrator, FEA

Mr. Robert Fri, Deputy Administrator, ERDA

HOUSE SCIENCE & TECHNOLOGY, SUBCOMMITTEE ON ENERGY RESEARCH, DEVELOPMENT & DEMONSTRATION (FOSSIL & NON-FOSSIL) WITNESS LIST AT HEARINGS DEALING WITH SYNTHETIC FUELS

FUTURE HEARINGS

COLORADO, OCTOBER 25, 27, & 28; Not yet available; possible witness list to be released 10/10 or 10/14. State and Local government representatives and concerned parties to discuss community impact.

WASHINGTON, D.C., OCTOBER 20, 21 & 22;

OCTOBER 20

Governor Salmon of Vermont

Barry Bosworth, Brookings Institution

Dr. Hass, Cornell University

Professor Ed Mitchell, American Enterprise Institute

Mr. Arthur Treman, Dillion Reed & Company, Inc.

Dr. Greenspan, EAC

Dr. Arthur Burns, Federal Reserve Board

OCTOBER 21

Mr. Lee White, Consumer Federation of America

Mr. Clifton Garvin, Chairman of the Board, Exxon

Dr. Henry Linden, President, Institute of Gas Technology

Mr. Edward Strohbehn, National Resource & Defense Council

Mr. Willard C. Bull, Gulf Mineral Resource Company

Mr. Arthur Seder, President, American Natural Gas Service Company; also on behalf of Michigan-Wisconsin Power Co. & Texas Eastern Trans. Co

Mr. David Dwyer, Vice President, R & D, M.W. Kellog Company

OCTOBER 22

Mr. Robert Fri, DA, ERDA

Mr. Parsky, Asst. Secretary of the Treasury

Mr. Don S. Smith, Vice Chairman, FPC

Mr. Russel Train, Administrator, EPA

File

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

October 10, 1975

TO: Directors of Congressional Relations
(See Distribution List)

FROM: H. Hollister Cantus
Director of Congressional Relations, ERDA

SUBJECT: PRESIDENT'S SYNTHETIC FUELS LOAN GUARANTEE PROGRAM

The Office of Management and Budget has asked that I distribute for your information the attached package of information relative to the President's Synthetic Fuels Loan Guarantee Program.

As most of you are aware, a unique opportunity exists in which to expedite the implementation of that program. The ERDA Authorization Bill, S. 598, includes enabling language similar to the President's program. This section (§ 103) was added by the Senate and is presently before the Conferees -- members of the House Committee on Science and Technology who are in the process of holding hearings on this complex program.

The major element of confusion which presently exists on the Hill has to do with the relationship of this loan guarantee program to the broader Energy Independence Authority proposal. In a nutshell, the synfuel loan guarantee program would eventually become a part of the EIA mandate. However, since the purpose of this program is to get the synfuel program going now in a manner which will enable the United States to both identify the problem areas associated with large synthetic fuel plants and to be in a position to expand the program to the President's goal of 1 million barrels of synfuel per day in 1985, this first step, essentially an information program, is required, regardless of whether or when the EIA is established.

I commend the attached information to your attention. It helps if we're all singing from the same sheet of music. If you have any questions, please do not hesitate to call. My Assistant Director for Fossil Energy, Mr. David O. Webb, is my task team leader on the subject. Dave can be reached on 376-4036. Other members of the task team are also available to respond to questions.

Distribution:
White House, OMB, State, Treasury, DoD, Navy, DOI, Agriculture, Commerce, Labor, DOT, HEW, App. Regional Commission, EPA, FEA, FPC, NASA, SBA

(PLEASE DISTRIBUTE WITHIN YOUR AGENCY AS YOU DEEM APPROPRIATE)

VOTE OF HOUSE SCIENCE & TECHNOLOGY COMMITTEE MEMBERS ON SEC. 103 OF THE FY 76 ERDA AUTHORIZATION (12/11/75)

	DEMOCRATS	REPUBLICANS
I.	(19) PRO (11)	(8)
	Teague (Tex.)	Mosher (Ohio)
	Downing (Va.)	Jarman (Okla.)
	Fuqua (Fla.)	Winn (Kans.)
	Flowers (Ala.)	Frey (Fla.)
	McCormack (Wash.)	Esch (Mich.)
	Brown (Calif.)	Conlan (Ariz.)
	Milford (Tex.)	Myers (Pa.)
	Thornton (Ark.)	Emery (Mich.)
	Ambro (N.Y.)	
	Lloyd (Tenn.)	
	Wirth (Colo.)	
II.	CON	
	(15) Hechler (W.Va.) (13)	Wydler (N.Y.) (2)
	Symington (Mo.)	Goldwater (Calif.)
	Roe (N.J.)	
	Scheuer (N.Y.)	
	Ottinger (N.Y.)	
	Waxman (Calif.)	
	Hayes (Ind.)	
	Harkin (Iowa)	
	Lloyd (Calif.)	
	Dodd (Conn.)	
	Blouin (Iowa)	
	Hall (Ill.)	
	Blanchard (Mich.)	
III.	NOT VOTING	
	Krueger (Tex.)	Bell (Calif.)
		Ketchum (Calif.)