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THE WHITE HOUSE
WASHINGTON

October 29, 1975

*Called
both Mosher
and Teague*

TDD

ADMINISTRATIVELY CONFIDENTIAL

MEMORANDUM FOR: JAMES T. LYNN
FROM: JAMES E. CONNOR *JEC*
SUBJECT: Recommended Telephone Call to Congressmen
Teague and Mosher regarding Synthetic Fuels

The President reviewed your memorandum of October 17 on the above subject and indicated the following:

" October 29 - Called -- Good"

Please follow-up with appropriate action.

cc: Don Rumsfeld
Max Friedersdorf



*See November 3 handwriting
for call to Teague*

October 29, 1975

Nancy -

Attached - for Max's review -
is a copy of the the Recommended
Telephone Call prepared by Jim Lynn
for the President's call to Congressmen
Teague and Mosher.

Jim Connor requested that only
excerpts be taken from this paper and
given to Congressman Mosher --NOT
the actual paper.

Trudy Fry

THE WHITE HOUSE
WASHINGTON

OCTOBER 24, 1975

MR. PRESIDENT

JIM LYNN IS STILL INTERESTED
IN HAVING YOU CALL CONGRESSMEN
TEAGUE AND MOSHER.

TERRY

*10/29/
called - good.*



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

OCT 17 1975

[Handwritten signature]

RECOMMENDED TELEPHONE CALL

TO: Congressmen Teague and Mosher
Chairman and Ranking Minority Member,
House Committee on Science and Technology

DATE: October 20, 1975

RECOMMENDED BY: James *[Signature]* Lynn

PURPOSE: Indication that the President considers
legislation on Synthetic fuels a high
priority.

BACKGROUND: ERDA receives an annual dollar
authorization as well as appropriation.
Nuclear items go through the Joint
Committee on Atomic Energy; non-nuclear
items go through the House Science and
Technology and Senate Interior Committees.
The House Science and Technology Committee
followed the President's requests fairly
closely this year. On the Senate side,
Chairman Jackson added a \$6 billion loan
guarantee authority for synthetic fuels.
The matter is now in the House/senate
Conference.

In testimony before the House Science
and Technology Committee on September 25,
Messrs. Zarb and Fri advocated House
agreement to the Senate amendment with
modifications, promised to provide the
Committee with needed additional authori-
zing legislation (grant and price support
authority) and also promised to make the
requisite appropriations request. We
anticipate sending up the additional
legislation the week of October 20.

Zarb and Fri explained that the President
wanted this authority as soon as possible in
order to get the Synthetic Fuels Commer-
cialization Program underway toward the
1-million-barrel-a-day goal by 1985.

The leadership of the House Committee -- with the exception of Ken Hechler -- seems to be behind the Administration proposals. However, they very much desire an indication from the President that this is a high priority item. (A brief booklet describing the Synthetic Fuels Commercialization Program is attached).

- TOPICS OF DISCUSSION:
1. Express appreciation for the prompt hearing schedule in the House Committee to cover the points raised by the Synthetic Fuels Commercialization Program.
 2. Point out that our reserves of oil shale are greater than all of the oil reserves of the Middle East and that our reserves of coal are 10 times greater than our oil shale reserves; oil shale and coal are the primary feed stocks for the Synthetic Fuels Program.
 3. In your view -- with the extensive lead times involved -- it is absolutely essential that we get this program started now -- so that by the time our domestic production of energy liquids and gases falls off in the late 80's and 90's, we will not, once again, fall into the trap of importing too much energy.
 4. As you understand it, the principal risk in synthetic fuels development is that competing energy sources -- like imported oil -- could be cheaper ten years from now than the revenues required to cover the costs of synthetic fuels production. Hence the Government has got to assure industry -- now -- that it will get a price to cover its costs -- then. Otherwise industry will sit around and wait to see what the world price of oil -- and U.S. import policy -- will be.

5. Express hope that the Committee will act expeditiously; underline point that this program can and should be started at the earliest possible moment and should not be held up for decision on the Energy Independence Authority.

POSSIBLE QUESTION AND ANSWER

Question: Mr. President, a number of the members are deeply concerned that if we go ahead with the Synthetic Fuels Commercialization Program, the consequent influx of people into relatively small communities may result in impacts on schools, roads, police, etc. that cannot be adequately financed by the community. Don't you think your program ought to have a provision addressing this need?

Answer: As you know, I presently have under consideration similar claims by communities that might be affected by exploration and development in the outer continental shelf. I want you to know that I am considering the needs of communities impacted by the Synthetic Fuels Program as well. It seems to me that there is a common problem here -- community impacts resulting from Federally related energy development. In my view you ought to look at the whole picture to avoid differing treatment in different parts of the country. I expect to have this issue resolved within the next week or two.

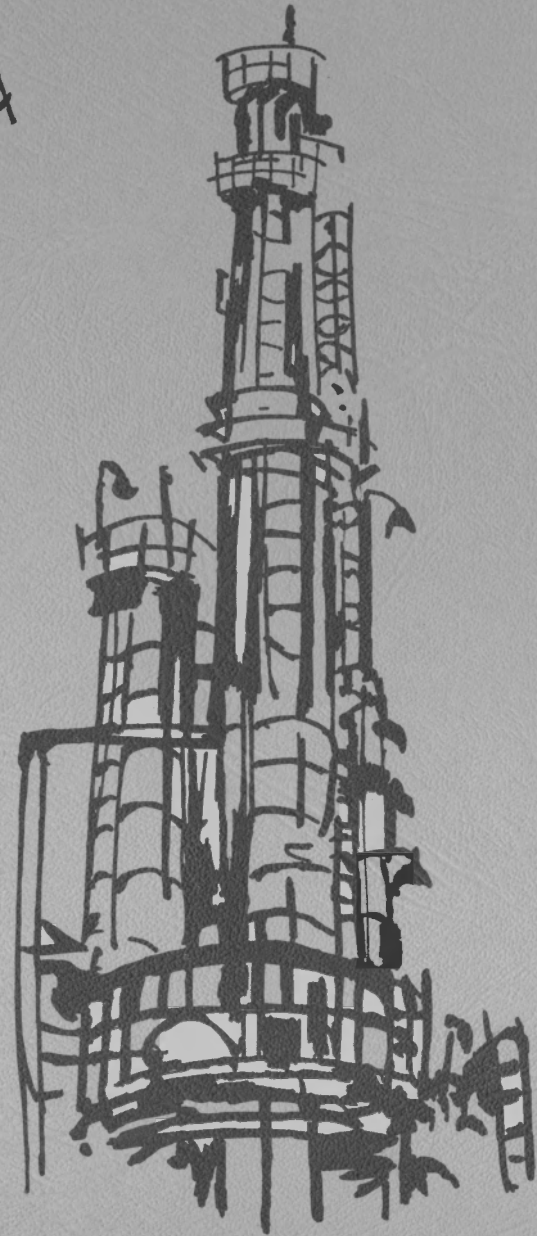
DRAFT

RECOMMENDATIONS FOR A
**SYNTHETIC FUELS
COMMERCIALIZATION
PROGRAM**

A BRIEF SUMMARY

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

NET



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:

- o The economic and environmental costs and benefits of alternative -size programs.*
- o The effectiveness and costs of alternative incentives which might be offered to industry by the federal government, and*
- o 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.



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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

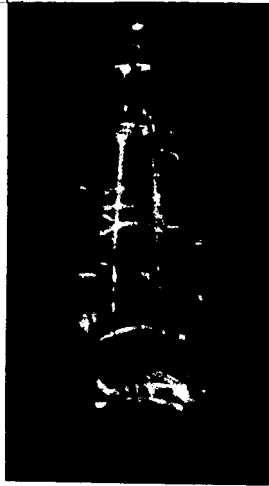
- TO INCREASE DOMESTIC ENERGY PRODUCTION AND THEREBY:
 - REDUCING RELIANCE ON ENERGY IMPORTS
 - PROVIDING LESS EXPENSIVE SUPPLIES IF WORLD OIL PRICES CONTINUE TO RISE

- 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

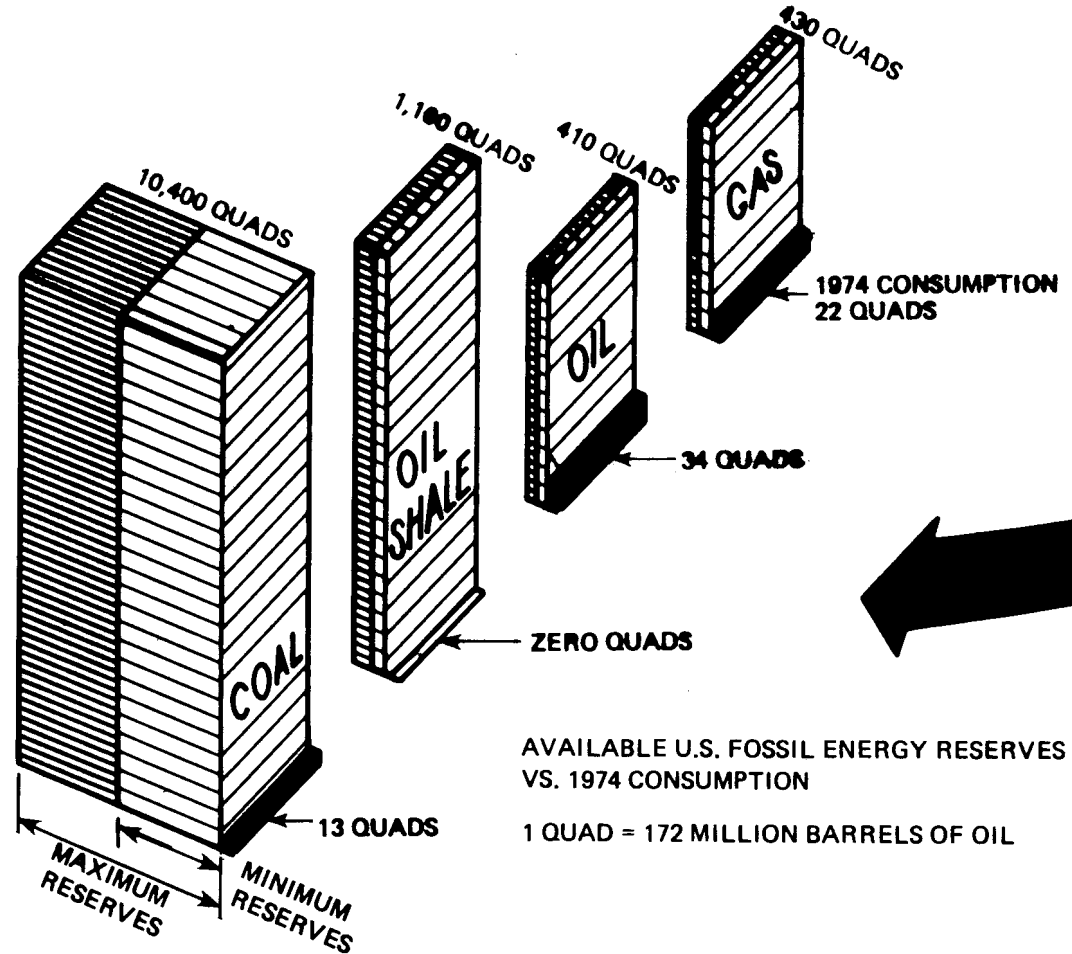
- THE UNITED STATES WILL NEED SIGNIFICANT AMOUNTS OF SYNTHETIC FUELS IN THE 1985 – 1995 TIME FRAME AND BEYOND
- BECAUSE OF ECONOMIC, REGULATORY AND OTHER UNCERTAINTIES, THERE IS NO ASSURANCE OF ADEQUATE INDUSTRY DEVELOPMENT IN THIS TIME FRAME WITHOUT INCENTIVES
- A TWO PHASE JOINT FEDERAL/INDUSTRY PROGRAM 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.

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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



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 HYDROELECTRIC 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.

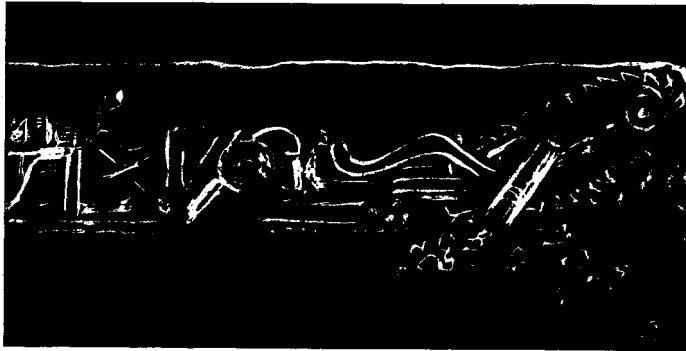
How will the President's goal be met?

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

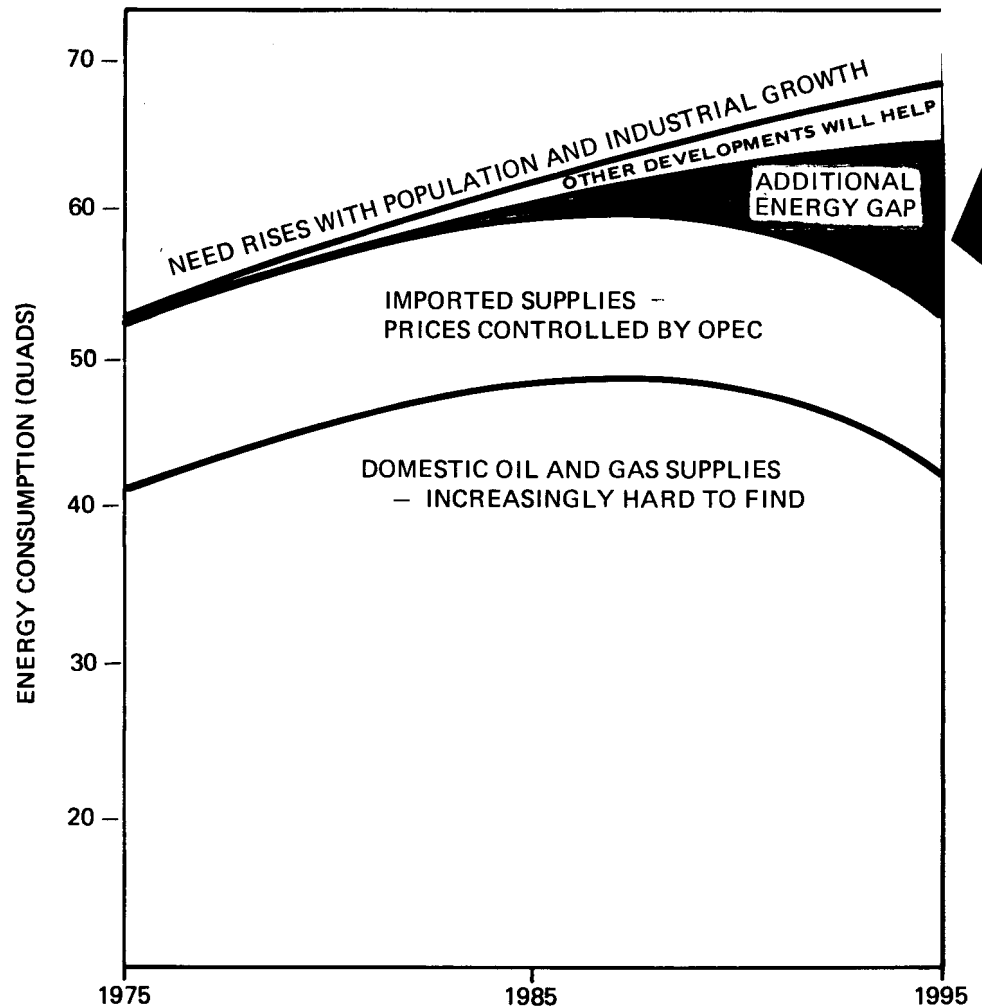
- IN THE LATE 1980'S DOMESTIC SUPPLIES OF OIL AND GAS WILL DECLINE RAPIDLY EVEN WITH GAS DEREGULATION, OIL DECONTROL AND EXTENSIVE OCS AND ALASKA DEVELOPMENT.
- MOST INDUSTRIAL PLANTS, SPACE HEATING AND TRANSPORTATION SYSTEMS ARE DESIGNED FOR OIL AND GAS.
- SOLAR, WIND AND GEOTHERMAL STILL HAVE LONG 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 aren't moving out too soon?

DOMESTIC SUPPLIES OF OIL AND GAS ARE PROJECTED TO DECLINE BEGINNING IN THE LATE 1980'S. PRODUCTION OF A NATURAL GAS HAS 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 PROJECTIONS 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 OUR RESOURCES. IT IS NOT AN EITHER/OR QUESTION.

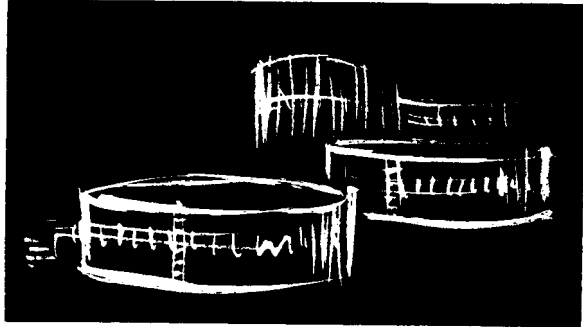
What about reducing demand? Why can't we conserve more energy and thus put off synthetic fuels until we get geothermal energy or more of the clean renewable resources such as solar energy?

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 first 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. THESE INCLUDE NATURAL GAS IN THE HOME, SYNTHETIC OIL FOR TRANSPORTATION, COMMERCIAL AND RESIDENTIAL USE AS WELL AS GAS AND LIQUID FOR CHEMICAL FEEDSTOCKS AND ELECTRIC GENERATING POWER PLANTS WHICH ARE NOT DESIGNED FOR COAL.

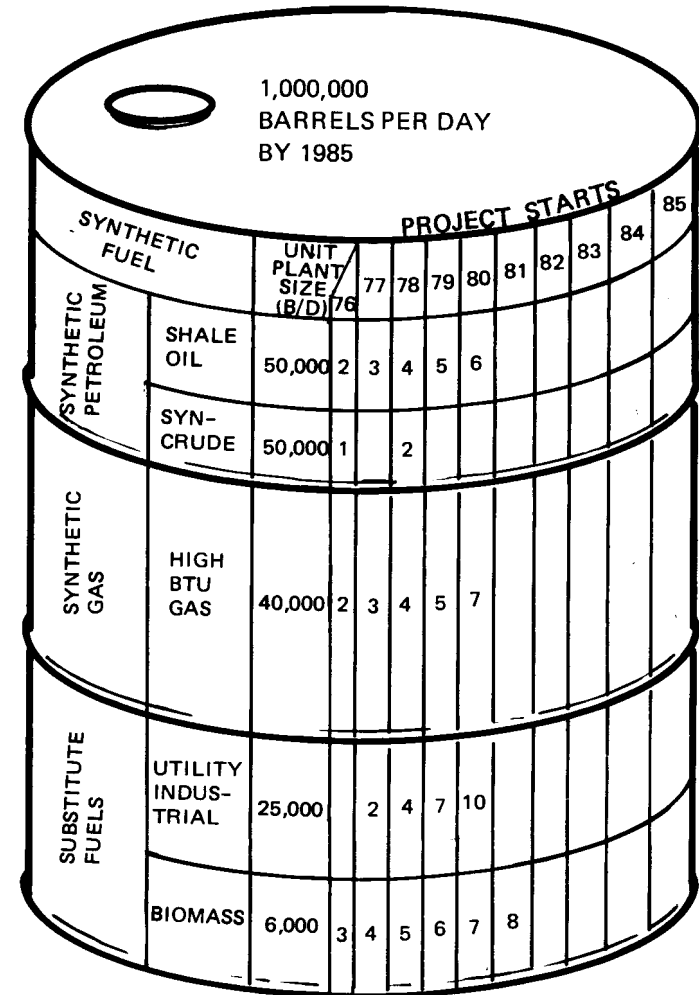
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HOW WILL IT BE DONE?

THE RECOMMENDED INCENTIVES ARE DESIGNED TO MINIMIZE FINANCIAL RISKS, AND TO THEREBY ENCOURAGE INDUSTRY PARTICIPATION.

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-RECOURSE 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 SYN FUEL 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?

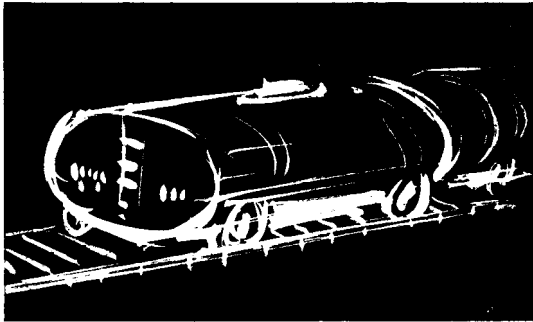
ADDITIONAL MINES AND TRANSPORT SYSTEMS WILL CERTAINLY BE NEEDED. HOWEVER, FOR A 1,000,000 BARREL PER DAY PROGRAM, COAL CONSUMPTION COULD BE EXPECTED TO INCREASE ABOUT 15 PERCENT FROM THE CURRENT 625 MILLION TONS PER YEAR. SIMILARLY, IT IS EXPECTED THAT WHILE ADDITIONAL CONNECTING RAIL SPURS AND PIPELINES 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 ASSISTANCE 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.

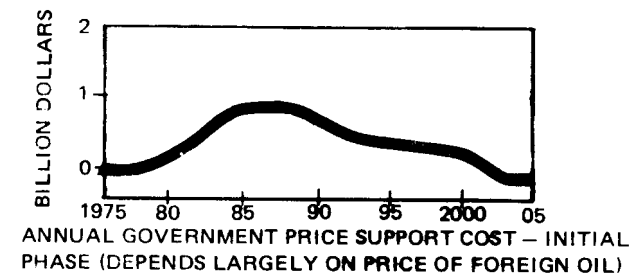
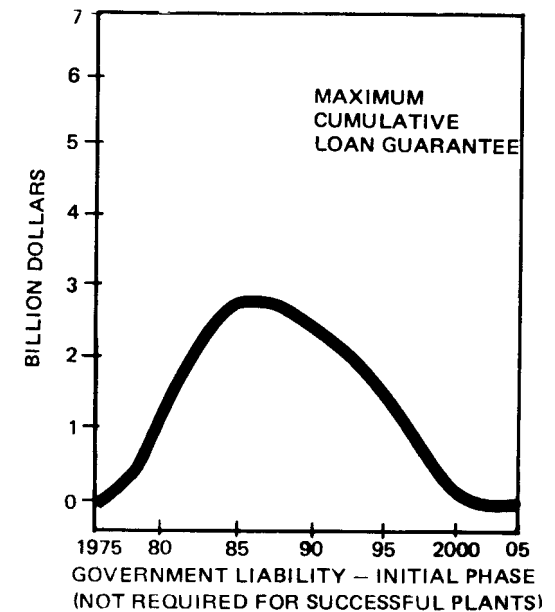
PRIVATE INDUSTRY SHOULD PROVIDE THE TECHNICAL AND MANAGEMENT EXPERTISE AND APPROPRIATE CAPITAL IN RESPONSE TO THE REDUCED RISK THAT THE COMMERCIALIZATION PROGRAM WOULD PROVIDE. THE SYNTHETIC FUELS PROGRAM CANNOT BE IMPLEMENTED IN A TIMELY MANNER BY SIMPLE SUPPLY/DEMAND MARKET FORCES.

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.

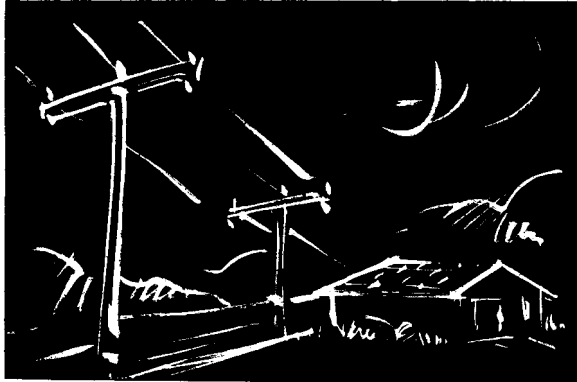
AT THE PRESENT TIME, U.S. OIL AND GAS COSTS ARE LESS THAN SYNTHETIC FUELS ALTHOUGH OIL AND GAS COSTS WILL CONTINUE TO RISE AS U.S. RESOURCES ARE DEPLETED. SYNTHETIC FUELS WILL BE NEEDED TO AVOID INCREASING U.S. OIL AND GAS IMPORTS AND SHOULD BECOME MORE ECONOMICAL THAN OIL AND GAS IN THE EARLY 1990'S.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

PROGRAM COSTS*



* 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 LESSENERED 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.

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:

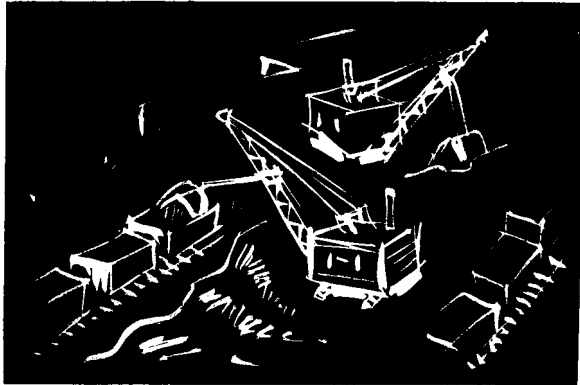
- INTERNATIONAL LEVERAGE (IMPROVED BARGAINING POSITION) ASSOCIATED WITH POSITIVE U.S. LEADERSHIP IN DEVELOPING ALTERNATIVE FUEL SOURCES
- RESOLUTION OF INDUSTRY'S UNCERTAINTY WITH REGARD TO GOVERNMENT SUPPORT FOR SYNTHETIC FUEL DEVELOPMENT WHICH MAY SPEED PRIVATE SECTOR INVESTMENT
- THE VALUE OF A POTENTIAL 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.