

CHAPTER VIII
RECOMMENDED FEDERAL PROGRAM

A. INTRODUCTION

The recommended Federal program for synthetic fuels commercialization consists of the following elements:

- Guidelines for administering the Recommended Financial Incentives Program
- An environmental protection strategy
- A limited program of regional community impact assistance

Each of these elements of the recommended program is discussed in this chapter. Incentives involving changes in existing statutory authorities are discussed in Chapter X.

B. PROGRAM GUIDELINES

The proposed incentive program for synthetic fuel commercialization is described in detail in the sample Federal Register insertion included as Appendix B. It is based on the incentives presented in Chapter VII. The major features of these incentives are described below and the analyses leading to their selection are included in Volume III of this report.

It is recommended that incentives be provided to successful offerers on a competitive basis. The incentives are intended to cause the recipients to develop and demonstrate the commercial production of particular synthetic fuels. The incentives for substitute fuels are directed toward both regulated companies and unregulated companies. The incentives for synthetic natural gas are directed toward regulated companies only. All other incentives are directed toward unregulated companies.

1. Synthetic Petroleum derived from oil shale or coal and Non-regulated Substitute Fuels, except those produced from Biomass: Competitively bid combination of a non-recourse loan guaranty for up to 50 percent of total project cost plus a price guaranty.

Under the loan guaranty part of this incentive, the government would guaranty, on a "non-recourse" basis, the payment of principal and accrued interest on a loan for up to 50 percent of the estimated total project cost of the development of a synthetic fuel production project. In addition, the government would consider guaranteeing a loan for up to 50 percent of overrun in excess of estimated total project cost; however, as a matter of policy, such supplemental guaranty, if provided, would be on a "recourse" basis. "Non-recourse" means that in the event of default on the guaranteed loan the government would assume the loan obligation and assert its claim against the borrower but its recovery right would be limited to the assets of the synthetic fuel production project, without recourse to other assets. "Recourse" means that in the event of default on the guaranteed loan, the government's recovery right would extend to all assets of the project equity participants (and of the participants therein) as well as to those of the project.

Under the price guaranty part of this incentive, the government would pay the producers of the fuels an amount equal to the difference between the agreed to guaranteed price and the market or selling price of the fuels, if less than the guaranteed price. The guaranty price would be paid only for fuel actually produced up to the agreed to rated output capacity of the plant. No payments would be made if the market or selling price of the fuels equals or exceeds the guaranteed price. The government would have the option during the period in which the price guaranteed incentive was in effect, to acquire up to the agreed to rated output capacity of the plant at the guaranteed price. Production in excess of this capacity would not be subject to this option.

The price guaranty would apply only to a specified quality and quantity of fuel delivered to a designated pumping station(s) or other point(s) of delivery. Price guaranty(s) would be related to a market price(s) which would be measured or calculated at this same point of delivery.

The loan guaranty would extend over the life of the loan which may not exceed the lesser of 25 years or 90 percent of the useful economic life of the project. The price guaranty would extend no longer than the period of the loan guaranty or, if not granted in combination with a loan guaranty, no longer than 25 years.

The timing and terms and conditions of the loan guaranty would be subject to Department of the Treasury approval.

2. Synthetic Natural Gas derived from coal for regulated sale and Substitute Fuels derived from Biomass for unregulated sale: Competitively offered Non-recourse Loan guaranty of up to 75 percent of total Project Cost

Under this incentive, the government would guaranty, on a "non-recourse" basis, the payment of principal and accrued interest on a loan for up to 75 percent of the estimated total project cost of the development of a synthetic fuel production project. In addition, the government would consider guaranteeing a loan for up to 75 percent of overrun in excess of estimated total project cost; however, as a matter of policy, such supplemental guaranty, if provided, would be on a "recourse" basis. "Non-recourse" means that in the event of default on the guaranteed loan the government would assume the loan obligation and assert its claim against the borrower but its recovery right would be limited to the assets of the synthetic fuel production project, without recourse to other assets. "Recourse" means that in the event of default on the loan, the government's recovery right would extend to all assets of the project equity participant (and of the participants therein) as well as to those of the project.

The loan guaranty would extend over the life of the loan which may not exceed the lesser of 25 years or 90 percent of the useful economic life of the project.

The timing and terms and conditions of the loan guaranty would be subject to Department of the Treasury approval.

3. Substitute Fuels derived from Coal for Regulated Sale:
Competitively Awarded Construction Grant up to 50 percent
of Total Project Cost

Under this incentive, the government will provide a fixed dollar amount grant for development of a synthetic fuel production project. The grant will be for a portion of the estimated total project cost of developing the synthetic fuel production project, but will be supplemental to contractor provided financing.

C. ENVIRONMENTAL PROTECTION STRATEGY

Regardless of which option is selected, it is recommended that an environmental protection strategy be a major part of the synthetic fuels program. Such a strategy would have several objectives:

- To assist in evaluating specific synfuels projects which are proposed to be included in the program.
- To prevent any significant adverse environmental impacts that may result from any activity included in the program.
- To develop a complete information base for determining whether and how to best utilize the technical and economic information developed through the commercialization program.

Although the environmental impact statement for the program provides a comprehensive description of the potential impacts that may result from a synthetic fuels program, it is clear that the presently available environmental information base is not as complete as is desirable. In this regard, the environmental impact statement identifies where major uncertainties exist with regard to the likelihood or the magnitude of any potential environmental impacts.

The existence of major uncertainties with regard to technical processes suggest that considerable data gathering should be incorporated into the early phases of the program. Today's knowledge about the major synfuels processes is inadequate to select any particular process as

being environmentally superior. Similarly, the knowledge base does not justify excluding any primary resources or regions of the country from further considerations of the program. Specification of a mix of process feedstocks, technologies and sites that may be desirable to attain high production levels after 1985, is, therefore, premature at this time on environmental grounds. The commercialization program should yield the environmental and other data that will allow distribution of the synthetic fuels industry as the program's experience in the Nation's interest warrants it. Thus, a program with considerable feedback is needed. This feedback can be realized through a phased approach in which the initial phase of the program is designed to ensure the experimental mix of technologies, feedstocks, and regional sites. The design of subsequent phases can be determined when sufficient data from the initial phase has been evaluated.

The environmental protection strategy should likewise be flexible in design in keeping with the uncertainties in the present state of environmental knowledge and future program direction. A mechanism for continuing review of the program results and modifications to the design and the administration of the program is recommended.

Finally, it is appropriate that the synthetic fuels program provide opportunities for necessary environmental experimentation and demonstration activities. Examples of some of these activities which would be appropriate to include in the program, are tests on the performance of various types of environmental control equipment, research into the effectiveness of various means for land use planning and reclamation techniques, and studies of the feasibility of different ways for providing for rapid community growth in an orderly and efficient fashion.

A number of specific steps are recommended to identify those synthetic fuels projects which are environmentally sound and which will provide the kind of environmental information desired in the commercialization program:

- Environmental factors should be included among the criteria which the government uses to select alternative proposals and sites. Proposals for projects can include site specific environmental data and a discussion of the mitigating measure that would be taken.
- Prior to any government decision to proceed with the actual construction and operation of a plant, a site specific environmental impact statement will be needed.
- An environmental advisory board should be formed assuming a decision is made to proceed with the synthetic fuels program. An early task of the advisory board would be to define appropriate environmental criteria for evaluating synthetic fuels proposals. These criteria should be designed to ensure a mix of technologies, feedstocks, and regional locations in order to provide adequate data for the design and refinement of subsequent phases.
- Information should be included in each project proposal about the capabilities of a region or locality to absorb the socio-economic impacts that may result from the proposed project. The proposal would identify any special assistance that the local community or region may need to accommodate rapid growth resulting from accelerated development.

The prevention of significant adverse environmental impacts during the initial phases of the synthetic fuels program will depend upon successful performance of a number of key steps. Some of these must occur prior to initiating construction; other steps can be taken during construction and while the facility is in operation. Examples of some of these steps include:

- A carefully prepared development plan for individual synthetic fuels plants, mines, and related facilities should specify the environmental protection tactics which will be utilized for that specific facility.

- The development plan would be coordinated with the land use, transportation, and other plans of local and state agencies. This plan would identify the applicable federal, state and local environmental standards and guidelines. Some of the environmental requirements for the synthetic fuels program are listed in Table 21.
- The development plan would identify the environmental control technology that will be used for each facility. It is desirable that the best available technology be identified and utilized where applicable.
- Comprehensive environmental monitoring and surveillance program could be planned and undertaken. Rigorous enforcement of all environmental standards and contractual provisions must be ensured. Physical facilities and records would be open to government inspection.
- Various mechanisms can be considered to promote environmental protection. Security bonds can be posted to guarantee sound development and restoration. The incentives program might provide for reimbursement by the government of extraordinary environmental control cost or the cost due to unanticipated environmental delays. The government might need to ensure that funds for reclamation would be available in the event of a plant failure.
- Consideration will be given to affected communities to assist in providing for an orderly energy development and community growth.
- Early warning mechanisms are needed to make certain that potential environmental threats will be anticipated and corrected without delay.

TABLE 21

Environmental Requirements for the Synfuels Commercialization Program

- Preparation of an environmental impact statement (National Environmental Policy Act).
- Compliance with new source performance standards for air emissions - affection both production and utilization of synfuels (Clean Air Act, Section III).
- Compliance with hazardous pollutant emission standards affecting both production and utilization of synfuels (Clean Air Act, Section III).
- State air quality implementation plans (Clean Air Act, Section 110).
 - Maintenance of the applicable national ambient air quality standards.
 - Prevention of significant deterioration of air quality.
 - A regulatory program for the pre-construction review of new sources of air pollution.
- Obtaining, if necessary, point source discharge permits pursuant to National Pollutant Discharge System (Federal Water Pollution Control Act).
- Compliance with State water quality standards and water quality management plans (Federal Water Pollution Control Act, Section 208).
- Compliance with limitations applicable to "underground injections" (Safe Drinking Water Act).
- Compliance with the requirements of Section 13 of the Federal Nonnuclear Energy R&D Act of 1974 regarding a review of water supply availability.

D. LIMITED IMPACT ASSISTANCE

Part of the Task Force recommendations for synthetic fuels commercialization is a limited program of Federal assistance to states and localities to assist them in financing public facilities necessitated by rapid energy-related growth in remote areas.

A community may not be able to raise sufficient front-end capital through the bond markets because of the uncertainty about a plant's ultimate success. Therefore, it is recommended that ERDA be given the authority to guaranty an annual tax revenue stream from the plant to eligible taxing entities up to an annual amount sufficient to amortize over 20 years the debt incurred to finance up to 75 percent of the basic, needed public infrastructure.

This proposal would put the risk burden on the Federal government and should enable impacted communities to raise the necessary front-end capital through bonding. This proposal acts as an incentive to states and localities not to overbuild and to install needed new administrative machinery for financing and managing growth. As such, it appears to be the most equitable and efficient solution to the lead-time financing problem. It enhances rather than replaces state and local access to capital markets, and it encourages the pass through of costs to end users.