

CHAPTER IX ORGANIZATIONAL OPTIONS FOR MANAGEMENT  
OF THE SYNTHETIC FUELS PROGRAM

A. INTRODUCTION

This chapter summarizes an analysis and provides recommendations for the type of Federal organization that will be necessary to administer the proposed financial incentives (grants, loan guarantees, price supports) program to encourage the private sector to build and operate synthetic fuels plants on a commercial scale demonstration basis. In completing this task, the following major factors were evaluated and assessed:

- The anticipated scope and size of the initial Federal synthetic fuels program, e.g., type technologies, number of plants and capacity of each at the 350,000, 1,000,000, 1,700,000 bbl/d program levels.
- The respective roles of the Federal government and the private sector under the recommended financial incentives to be offered including loan guarantees, price supports, and grants. Also considered were other incentives, contracts, cost sharing, and directly loans, since over the life of the program circumstances may arise that would suggest their use.
- The specific capabilities and anticipated flexibility that must exist within the Federal organization to carry out the program successfully.
- The basic types of Federal organizations with some potential to administer the program, including Federally-sponsored corporations of some form, existing Federal agencies, and a new executive agency. Also included were considerations of the necessary statutory authorities required to implement and operate the Federal organization.

A more detailed discussion of the results of the evaluation of each factor is included in the following sections.

B. CRITERIA FOR SELECTION

The following criteria were used in selecting the recommended Federal organization to manage the Synthetic Fuels Commercialization Program (SFCP). The organization should:

- Be responsive to Presidential and Congressional policies and oversight. The organization must be flexible enough to alter the program as a result of changes in the relative attractiveness of synthetic fuels. It is, therefore, important for the President and Congress to have adequate control to make the policy decisions which may be required after the program is implemented.
- Be politically viable and, thus, legislatively feasible in the near term to permit timely implementation of the program.
- Have an existing basic technical and management competence in the synthetic fuels area which can be built upon in a reasonably short time frame. This will insure early planning and expeditious implementation of the program.
- Facilitate the phase out of the government role at the earliest acceptable time.
- Complement rather than compete with ERDA's R&D program by providing a link between development, demonstration and full-scale commercial operations.

#### C. EVALUATION OF FACTORS AFFECTING FEDERAL ORGANIZATION

##### 1. Size of Recommended Program

The existence of three program level options complicates the organization analysis since the type of organization and the necessary legal authorities to attain the different program levels will vary. The analysis focused on the two lower options -- 350,000 bbl/d and 1,000,000 bbl/d.

At 350,000 bbl/d, the program can be easily integrated into the existing energy organization of the Federal government. The 350,000 bbl/d option is a commercial demonstration program involving synthetic fuels technologies that have not been previously tested in this country for technical and economic feasibility on a commercial scale. This program is, therefore, consistent with and logically falls within ERDA's mission under the Nonnuclear Act for development and commercial demonstration of nonnuclear technologies to produce energy from domestic resources.

The 1,000,000 bbl/d program option involves the construction and operation of a series of plants for each major synfuels technology to reach a 1,000,000 bbl/d (20 - 25 plants). The number of plants and total capacity envisioned under this option is an attempt to encourage the launching of a synthetic fuels industry through commercial demonstration of a number of plants and also for building a significant industrial capacity through the use of Federal subsidies to expand the number of synthetic fuels plants. Significant benefits could be realized by utilizing the two-phase approach to manage the program at this level. The first phase would include the commercial demonstration of the most promising technologies. The second phase would not be initiated until results of the commercial demonstration phase are available or at least until convincing evidence is realized proving the commercial viability of the approach. Transition to the second phase would offer an opportunity to re-evaluate the program, to determine whether different forms and/or levels of Federal support and/or organization are needed.

## 2. Respective Roles - Government Vs. Private Sector

The potential government investment in the synthetic fuels program could be quite high -- billions of dollars. Investment by the private sector will be even higher when one considers that each synfuel plant is likely to cost in the range of \$500 million to \$1 billion. A workable, effective government organization is a must in view of the size, risks and national importance of the program. It is also important to the private participants since government involvement of a counterproductive variety could lead to failure or lengthy delay of projects.

The proper roles between the Federal government and the private sector must be carefully defined in general terms at this time and later in far more detail. The potential size of the Federal investment and risk suggests that some management oversight (but not a detailed program

management) at the Federal level be part of the program for several important reasons:

- The risks to the Federal government are very high and therefore dictate that the government take necessary steps to protect itself against failure, whatever the cause.
- This program, if successful, could result in major new industries being created with the potential of lessening our Nation's dependence on foreign energy supplies. It is, therefore, important for the government to stay abreast of and know whether the program is succeeding or not.

On the other hand, the government should not be so deeply involved in the management of individual plants that the private sector's capacity to get the job completed is impaired or hampered by too much Federal government interference directly associated with administering the financial incentives. Therefore, a reasonable balance between government and the private sector should be achieved. The split in authority and responsibility as outlined in the following Table seems reasonable.

	Government	Private Sector
Decision on Number and Type of Plants to Build through Subsidies	Primary Authority	Offers Proposal
Terms of Subsidy	Primary	Offers Proposals. Retains right to reject if terms not agreeable.
Overall Plant Design	Approval of basic plant specifications	Primary Authority. Subject to general design approval of Government
Management of Plant Construction	Technical monitoring	Primary
Management of Plant Operation	Technical monitoring	Primary

### 3. Required Capabilities of the Federal Organization

A Federal organization to administer the Synthetic Fuels Program would need the following capabilities:

- Knowledge of the affected energy industries. Experience with and ability to develop sound working relationships with energy industries and public utilities.
- Technical know-how and experience. A reasonable understanding of the technologies, their risks and the process under which plants are constructed and operated. Capacity to conduct and monitor ongoing technical evaluation.
- Sound economic analysis capability -- economics rather than technical shortcomings will be the major hurdle to overcome. Knowledge of prices and trends in world and local markets, costs of production, marketing approaches.
- Sound environmental assessment and management capability.
- Strong administrative management system, particularly in procurement, Federal financial management and personnel recruiting and development.
- Capacity to expedite government "red-tape" -- (Federal, State, local) requirements which must be met in constructing and operating the plants.
- Capacity to understand and deal with the socio-economic impact problems which may occur at the local level.

### 4. Basic Types of Federal Organizations

#### a. New Federal Agency

1) Arguments for: The unique nature of the SFCP appears to argue for the establishment of a new Executive Branch department or agency, particularly if the 1 million bbl/d or higher option is chosen. A new

organization would be provided with a clear legislative charter to administer the program. In addition, a new management team would have greater flexibility to tailor capabilities specifically to the needs of the synfuels program.

2) Arguments against: On the other hand, the disadvantages of the creation of a new Executive Branch entity are numerous. A new agency would require new legislative authorization, time to establish itself as an organization, and probably more expense than the use of existing structures. It would add another member to the already numerous ranks of Federal agencies in the energy area. An organization with the sole task of managing the SFCP might tend to prolong the Federal role in the synthetic fuels industry. Finally, creation of a new agency could reduce the flexibility necessary for the determination of major changes in the level of the government commitment to the SFCP.

3) Assessment: While the uniqueness and magnitude of the SFCP at the 1 million bbl/d or higher level may argue for establishment of a new Federal entity, the lead time and risks involved in obtaining new legislation are important opposing considerations. Other associated costs include time required for organizational activation, greater budgetary needs, and reduced flexibility.

#### b. Government Corporation

This analysis did not focus in detail on any particular form of government corporation but considered all types in general -- wholly-owned government corporation, mixed ownership government corporation, and government-sponsored private enterprise. Examples of the application of the corporate form would include a Federal energy bank -- a wholly-owned or mixed ownership corporation, TVA -- a wholly-owned government corporation, and Comsat -- a government-sponsored private enterprise.

The traditional guidelines for the application of the corporate form or organization and management of government program have stressed the business nature and potential for self support of a program. The corporation is endowed with greater financial and managerial flexibility than that enjoyed by a government agency. This flexibility facilitates the business-type operations of the program.

Another important consideration is the issue of control. Despite some past efforts to establish standard mechanisms to ensure the responsiveness of such corporation to elected officials, there exist few truly effective mechanisms for such control. Also there is a trend toward giving new corporations even more "independence."

Therefore, it is important that the corporate form be reserved to the management of programs for which the public policy issues are relatively stable. Should major public policy decisions be required as is the case with SFCP, effective participation by the Congress and the Executive Branch tends to be limited by the independence enjoyed by corporations.

Government programs which fit these general criteria -- programs of a (1) business nature with potential to be self-sustaining which (2) require more financial and operational flexibility and for which (3) the relevant public policy issues are relatively stable -- seem to be best-suited for the corporate management form. It should be noted, however, that programs which meet these three criteria could be and have been carried out just as effectively by government agencies.

1) Arguments for: The major arguments for establishment of a government corporation to manage the SFCP are:

- The corporate form could provide needed isolation of the program from the political vicissitudes of Federal energy policy planning and development activities. This would serve to assure private participants of a consistent governmental approach.

- Flexibility of administrative and managerial policies could be beneficial, especially in the areas of personnel recruitment and funding mechanisms.

2) Arguments against: The major arguments against the establishment of a government corporation are:

- Initial start-up will take some time because of the need for legislation and initial establishment.
- The SFCP may need to be altered substantially at any point after its inception. A government corporation is less likely to be as responsive to the President and the Congress in making critical decisions which will be required over the life of the program.
- The SFCP is not intended to be self-supporting and the government role in the program will not include direct operations of a business enterprise.
- The recommended incentives do not require an independent entity to administer them.

3) Assessment: The operational and policy nature of the program do not appear suitable for the corporate management form.

c. Existing Executive Agency

1) Arguments for: The potential advantages of using an existing Federal Government entity to manage the SFCP are:

- Existence of many of the necessary authorities (e.g., in ERDA) thus requiring minimum new legislation.
- Shorter start-up time due to established capability.
- More direct Presidential and Congressional control.
- Minimize coordination and maximize consistency with Federal energy organization and policy mechanisms.
- Flexibility to alter or phase out the program in the short or long-run since a new organization will not have to be dissolved.
- Maximum use and sharing of the pool of relevant expertise which the government currently possesses.



2) Arguments against: The disadvantages of using an existing agency are basically the same arguments which are presented as advantages to the establishment of a new government agency:

- The task -- to eventually launch a new industry -- is quite unique and requires an approach and focus considerably different than those of other business subsidy programs, and management tasks.
- The impact of the program at the middle and high output levels on the general management of the agency will be considerable, thus, successful management of the SFCP at the 1 million barrel or higher level may require commitment of a significant portion of agency resources at all levels of management.

3) Assessment: At the 350,000 barrel per day level the existing agency option is the best-suited organization alternative. At the higher program level, for reasons of economy and legislative feasibility, the existing portion is also preferable.

A survey of the capabilities and authorities of several Executive Branch agencies was performed as part of this analysis. While other agencies have significant skills which would be useful in managing the synthetic fuels program ERDA appears to possess the best combination of capabilities and authorities to manage the program. Other agencies may contribute to the program. These include:

- Interior - Mining and Federal lands management.
- EPA - Air, water and noise pollution control.
- FEA - Overall energy planning.
- Commerce - Industry liaison

d. Organizational Recommendations

On the basis of these evaluations, it is recommended that:

- For the 350,000 bbl/d capacity program option, the Energy Research and Development Administration be expanded to include a separate Synfuels Program Office headed by a senior policy official (Executive Level IV) reporting directly to the ERDA Administrator. The reasons for these recommendations are:

- The 350,000 bbl/d option is a commercial demonstration program and therefore logically falls within ERDA's mission.
  - The ERDA has some existing capability that can be built upon to manage the program including technical, administrative, legal, financial, environmental and managerial capabilities and knowledge of affected industries.
  - ERDA has existing statutory authorities (The Federal Non-nuclear Energy Research and Development Act) that, with some change, can provide the recommended financial incentives and related administrative authorities to implement the program. Some modifications to ERDA's Non-nuclear R&D Act will be necessary as well as securing funding authorizations/appropriations.
  - The program should involve a process of constant technical upgrading during construction and operating phases. ERDA will be able to make significant contributions to this upgrading effort by sharing the results of its R&D program.
  - A separate program office should be established in order to reflect the significance of the Federal commitment to the commercial demonstration of synthetic fuels. A separate office would also minimize any conflict of interest between management of R&D efforts and management of commercial demonstration activities.
- For the 1,000,000 bbl/d program option, the organizational recommendation is more complex since this option could include a series of commercial demonstration plants for each major synthetic fuels technology and, in addition, the building of enough plant capacity to reach 1,000,000 bbl/d. The number of plants and total capacity envisioned under this option is an attempt to encourage commercial demonstration of a number of plants and also the building of an initial portion of such an industry through the use of Federal subsidies. Under the two-phased approach, ERDA is recommended to manage the first phase, which is a commercial demonstration program. Re-evaluation of the synthetic fuels program after the first phase has been completed may result in significant changes to the program. Federal financial incentives may prove to be unnecessary for some or all technologies. Technical assistance may continue to be required for some fuel types. If the program continues into the second phase with essentially the same organizational skills required--ability to participate in on-going technological upgrading, as well as ability to provide financial incentives--ERDA should remain the lead agency. If the government's role changes to that of a provider of limited financial assistance, it may be advisable to change Federal organizations as well. This would have to be determined at some point in the future.