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SALVAGING THE SYNTHETIC FUELS CORPORATION

INTRODUCTION

Once hailed as the "centerpiece of President James Carter's energy program," the Synthetic Fuels Corporation (SFC) is now viewed widely as an agency without a mission. Great strides in energy efficiency, coupled with new oil discoveries outside the Persian Gulf, have dissipated the sense of urgency associated with developing alternatives to foreign oil imports. Falling world oil prices, moreover, have made it unlikely that the huge capital investments necessary for the development of commercial synthetic fuel plants will prove economic in the foreseeable future. Consequently, the SFC finds itself faced with the task of trying to establish a synthetic fuels industry at a time when qualified sponsors for projects are proving very hard to find.

At the heart of the Corporation's problem is its charge to finance "commercial" plants, when a commercial market for synthetic fuels clearly does not exist. No amount of technical expertise or management competence, therefore, could be sufficient to allow the SFC to attain this mission. Instead of trying to find some magical technical fix or management technique, which would allow the SFC to accomplish the impossible, efforts should be directed at identifying an appropriate mission that lies within the limitations of current technical capabilities and current conditions in the world oil market.

Perhaps the best solution to the SFC dilemma would be to reorient the Corporation toward demonstrating the technical, rather than the commercial, feasibility of various synthetic fuels processes. This would help to address the legitimate concerns of those who believe that the synthetic fuels option must be maintained for national security reasons, without committing the taxpayer to huge, premature investments in unproved, and possibly unnecessary, commercial plants. Great care should be exercised, however, to ensure that the research and development

activities at the SFC are not allowed to grow out of proportion to the original intent of the program. It was just such a burgeoning of the initial synthetic fuels program concept that led to the Corporation's current problems.

THE CREATION OF THE SFC

Five years ago, responding to public pressures to "do something" about the second oil interruption in less than a decade, the House of Representatives approved a \$3 billion program to provide purchase commitments and price guarantees to the developers of synthetic fuels. The purpose of these guarantees was to speed the invention and production of alternatives to oil by ensuring that firms making the huge investments required to build synthetic fuels plants would not suddenly see their potential market undercut by some capricious action on the part of OPEC. In particular, there were widespread fears among companies contemplating the construction of plants that the OPEC nations would drastically cut the price of crude oil and flood the market with cheap oil, leaving them at an impossible cost disadvantage, and they therefore insisted the guarantees were needed. Since the subsidies would not come into effect unless such a price cut occurred, and then would extend only to those products actually under contract, the proposal seemed reasonable at the time.

When the synthetic fuels program reached the Senate, it was altered drastically. Instead of a \$3 billion commitment, the legislation mushroomed into an \$88 billion program, which not only included purchase commitments and price guarantees, but massive subsidies for the construction of the plants themselves. There were even provisions for the construction of plants to be owned and operated directly by the federal government. This was very different from the original House proposal. Still, bowing to the pressures of the approaching 1980 election, and the desire of many Members of Congress to have some positive program for dealing with the "energy crisis," the Energy Security Act of 1980 was passed and signed into law by President Carter.

Under its provisions, about one-fourth of the initial authorization--or roughly \$5 billion--was to be committed immediately to synthetic fuels projects arranged by the Department of Energy (DOE). This was intended to speed the process of developing the technology while the SFC was being organized and staffed. After the Corporation was declared operational, it would have the option of either accepting these projects or leaving their supervision to DOE. The effect of this provision was to accelerate sharply the outflow of funds authorized for synthetic fuels and to limit the scrutiny of initial projects.

The law stipulated that the SFC was to be governed by a Board of Directors consisting of seven members, initially appointed to staggered terms ranging from one to seven years. These Directors were authorized to employ a variety of devices in financing plants ranging from joint ventures and direct subsidies to purchase

and price commitments. Moreover, Congress implied in the Act that all of the financing mechanisms should be used, virtually ensuring that at least some of the projects would be partly government-owned.

Enormous congressional pressure to move quickly characterized the passage of the Energy Security Act that created the SFC. This pressure was evident in the Act's requirement that the Corporation meet production targets of 500,000 barrels of synthetic fuels per day by 1987, and 1.5 million per day by 1992. A major factor in this sense of urgency was the assumption that world oil supplies were in imminent danger of exhaustion. The failure of these assumptions to materialize has been a severe blow to the infant synthetic fuels industry.

PROBLEMS WITH THE CORPORATION

As with many panic-driven responses to problems, the SFC was seriously flawed. It was severely constrained in the projects it could consider by provisions requiring that the project sponsors could not obtain credit elsewhere. It was further hindered by requirements that projects had to demonstrate a diversity of technologies and geographic locations. Consequently, no project deemed worthy of financial support in the marketplace was eligible for SFC consideration, and political concerns often had to be given undue weight.

When the Reagan Administration took office, considerable effort was made to reduce wasteful or questionable outlays by the Synthetic Fuels Corporation. Administrative overhead was reduced drastically, and project sponsors were required to provide most of the capital for their proposed plants. What could not be overcome, however, were natural market forces. These brought about a significant decrease in world oil demand at the very moment new supplies were being discovered. The combined effect of these two factors caused a sharp reduction in world oil prices, instead of the sharp increase upon which the rationale of most synthetic fuels projects had been based. As a consequence, increasing numbers of sponsors abandoned what had become obviously uneconomic investments.

A simple analysis of the difference between the anticipated 1990 price of oil, commonly accepted when the SFC was created, and the anticipated 1990 price under today's market conditions makes clear why sponsors initially believed their projects would be economic--and why they no longer do. Projections of future oil prices commonly accepted during the Carter years indicated that by 1990 the nominal price of a barrel of oil would be around \$115, and the real (constant dollar) price would be at least \$45. At these prices even the \$92 per barrel cost of synthetic fuels recently projected would be attractive. In fact, some analyses in circulation at the time indicated that synfuels might be economic as early as 1987. But a projected price of under \$50 per barrel for 1990, as many analysts now believe will be the case, makes a \$92 barrel of synthetic fuel unattractive indeed.

As more and more credible sponsors left the synthetic fuels arena, the SFC found itself faced with a dilemma: although proposals worthy of support were rapidly becoming unavailable, the Corporation still had to fulfill its congressionally mandated production goals of 500,000 barrels of synthetic fuel per day by 1987, and 1.5 million barrels per day by 1992. At the same time, partisan attacks on the SFC--ironically, often coming from legislators who had been among its earliest and most vocal supporters--further hindered the organization's ability to operate.

REORIENTING THE CORPORATION

Although it is now clear that the idea of an SFC was at best ill-conceived, eliminating the Corporation is complicated by the fact that some firms have made substantial financial commitments on the basis of what they believed to be firm promises by the federal government. While it hardly would be advisable to finance new projects that are highly unlikely to become economic within the foreseeable future, the federal government should meet the commitments it has made to investors on which those companies rely.

Beyond Washington's existing commitments, there is a question of whether there is a legitimate federal role in the synthetic fuels area. Clearly, the federal government should assume no role in the commercialization of technologies--this is best left to the private firms and the marketplace, as the SFC's sorry history confirms. There may be, however, a modest role in the area of basic research into new technologies, and even in the demonstration of the technical feasibility of such technologies in certain instances. There should not, however, be any involvement by federal agencies in the construction or subsidization of plants intended for commercial operations.

In the final analysis, some argument for basic research into synthetic fuels technology based on the need to have such technologies available in the event of actions by nations hostile to U.S. interests may be justified on national security grounds; the construction of \$88 billion worth of commercial plants cannot. Such a massive outlay at a time of growing concern over budget deficits and of more than adequate supplies of conventional energy sources simply makes neither economic nor political sense. Instead of a massive commercialization program, the federal government could spend modest sums to test the technical feasibility of various processes, so that they would be available if needed. Washington also could demonstrate these technologies through the pilot or "semi-works" scale. This would allow the nation to retain the synfuels option without the unnecessary and expensive commitment to build plants Americans may never need.

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