

THE BOTTOM LINE: CAN WE FINANCE MAJOR SYNFUELS  
CONSTRUCTION IN THE '80's

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CAN WE FINANCE MAJOR SYNTHETIC FUELS CONSTRUCTION IN THE 80s?

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Several months ago, I received a letter from Dr. Stokes inviting me to speak here today suggesting that it would be appropriate to submit a copy of my prepared remarks on June 19, a full seven weeks ago. I happily accepted the chance to air my views on financing commercial scale synthetic fuels projects, but I rebelled at the suggestion that my views should be the same today as they were seven weeks ago. As Dr. Stokes and his committee have learned in selecting a speaker from the Synthetic Fuels Corporation, people as well as ideas can change in a very short period of time. In short, this industry is on a political and economic roller coaster ride and one's ideas, whether they be financial or otherwise, are apt to change direction accordingly.

Two months ago, my bottom line was, and continues to be, that the private industry, will NOT be willing or able to finance a meaningful number of synthetic fuels plants in this decade under existing market conditions without federal financial assistance. I am uncomfortable with this conclusion because philosophically I agree that the free enterprise system efficiently allocates scarce resources such as capital, labor and hydrocarbons if left to its own devices. However, now is not the time for philosophy, but for reality. The market prices for energy are, neither today nor will they be for some time, a function of supply and demand. Natural gas prices are regulated in this country; oil prices are indirectly regulated by the Windfall Profits Tax in this country and directly regulated globally by OPEC for reasons which are often not economic in origin. In short, philosophical ideals may be appropriate for utopia, but we are not there yet. To achieve their victory on tax cuts last week, the Reagan Administration demonstrated their skill in the political process. Certain ideals were sacrificed to achieve the major objective. I believe that the rapid development of our energy alternatives should be the next major objective.

The logical questions that follow are -- Does the United States need to develop its synthetic fuels potential in this decade and if so, how can it be financed. The answer to the first of these questions is obvious to everyone here. Our domestic reserves of oil and natural gas are small relative to our appetite for liquid and gaseous fuels. Dependence on the importation of these fuels from foreign countries has proven hazardous in the past and may again in the future. Yet, our reserves of coal and shale are enormous and the technology exists, albeit unproven on a commercial scale, to convert these solid to liquid and gaseous fuels on an economic basis. The answer to the second question -- how can our synthetic fuels potential be financed -- is not so apparent.

To understand the financing alternatives available to a typical synthetic fuels project, it is necessary to review the characteristics of such a project. A typical commercial scale plant will produce synthetic fuel products such as shale oil, high Btu gas or methanol in amounts equivalent to 25,000 barrels of oil per day or greater. Such a plant will take approximately two years to design and permit and an additional four years to construct. It will cost \$1.5 billion in 1981 dollars and \$3.0-\$4.0 billion in nominal or "as spent" dollars. In addition, for most of the projects being constructed today, there are no similar plants in operation either in the U.S. or elsewhere. These will be the pioneers. Lastly, the financial and economic viability of the typical project depends largely on the future direction of oil and gas prices.

A synthetic fuels project has certain risks from the financial point of view which must be adequately dealt with if financing is to proceed. Some of these risks are: (i) non-completion; (ii) significant cost overruns; (iii) reduced product quantities and qualities relative to design specifications; (iv) large discrepancies between projected and actual prices of conventional oil and gas in the late 1980's and beyond. These risks are so large that some of the traditional methods of managing them are not now available. Performance guarantees and insurance against calamities are certainly useful but the exposure to loss from non-completion goes well beyond the dollars which might be recovered from those sources. Because of these characteristics, most of the traditional forms of credit support to enable project financing will not be available to project sponsors. The sponsors will be unable to shoulder all of the financial burden either directly or through the use of their corporate guarantee because of the sheer size of such financial commitments relative to the sponsors' total assets and obligations to their existing businesses. Without guarantees from some creditworthy source, the project itself cannot support the high leverage called for in most of the proposed projects. Lenders will view the projected revenue stream with healthy skepticism given the recent volatility in energy prices and the technological uncertainties surrounding most projects. Lastly, firm "take or pay" contracts will be difficult to obtain given the long lead time before product delivery and the uncertainty as to price upon commercial operation.

It is with this reality in mind that the previous Administration, faced with the necessity to create a comprehensive energy program for national security reasons, supported the Energy Security Act and the creation of the United States Synthetic Fuels Corporation. This law gives the Corporation the authority to provide the necessary credit support through the financial assistance of loan guarantees, price guarantees and purchase agreements. In addition, the financing, particularly from the equity sponsors, is facilitated by the various tax incentives, such as investment and energy tax credits. Dedicated to the concept that a synthetic fuels industry would be developed by the private sector if supported in the initial stages with government assistance, the previous Administration was successful as a catalyst in creating a strong and relatively broad reaction from corporate America.

Without question, the change in administrations has been unsettling to the development of the commercial scale synthetic fuels projects. This is a normal reaction to change, particularly when the signals of future directions provided by the Reagan Administration are mixed. President Reagan has often expressed his philosophy that (1) commercial enterprise should be left to the private sector, (2) government programs, particularly in the energy area, should be scaled back to lessen the interference with the natural efficiencies of our free enterprise system; and (3) the federal budget should be trimmed wherever possible. This philosophy was responsible for cutbacks and recessions in certain DOE alternative fuels programs, such as second round feasibility studies, demonstration projects and the activities of the Office of Alcohol Fuels.

Nevertheless, the President has expressed on several occasions his support for the United States Synthetic Fuels Corporation and its mission. It seems relatively clear that his position was influenced by the strong bi-partisan support which continues to be evident in both the House and the Senate for the Energy Security Act and the Corporation.

Unfortunately, the Corporation is still not operational despite the fact that the Act was signed into law over a year ago and we do not expect it to be declared operational for at least another three months. The confirmation of Mr. Noble as chairman and his subsequent statements coupled with the recent actions of the Synthetic Fuels Corporation have certainly been disturbing to most of us. However, I am hopeful that continuing support from Congress will help end this period of uncertainty and we can go about our business of financing synthetic fuels projects with the help of federal assistance.

The equity capital -- who will provide it? In the initial stage of development of a synthetic fuels industry, the equity capital -- approximately \$750 million to \$1 billion per project -- will be supplied by companies who have more to gain from the success of a project than simply a fair return on their investment.

The major oil companies who are looking for ways to capitalize on their significant investment in natural resources -- shale, coal and tar sands and for new energy products to refine and sell as their oil and gas reserves are depleted in the future. The major chemical companies who are looking for ways to gain control over the sourcing and the costs of their feedstocks. The coal companies, particularly those with the poorer quality coals who are anxious to foster the development of new markets for their coal. The utilities -- both electric and gas -- who seek security of feedstock supply and some measure of stability in prices. The architect/engineering and construction firms who are anxious to be in the forefront because of this potentially high market for their services. The licensors, vendors, and fabricators of major components -- such as the gasifiers, the oxygen plants and the combined cycle turbines -- are all interested in stimulating the development of new markets for their products. And there are others.

The point is that the initial projects will be sponsored or financed by relatively large corporations whose expectations for profit go beyond the earnings of the specific project.

Nonetheless, very few corporations will invest their shareholders' capital in a synthetic fuels project without a reasonable level of comfort that the pro forma financial returns are commensurate with the inherent risk of such a project. ~~In today's world of high inflation, a risk-free investment in long-term Treasury bonds yields approximately 14%, and high quality tax-exempt securities yield in excess of 12%.~~ In light of this, it is my belief that most corporate investors of the type I have just mentioned are expecting after-tax returns of at least 20% - 25% over the economic life of the project. Based on Kidder, Peabody's financial model which was designed specifically to analyze the projected financial returns from synfuel projects, most of the projects which we are involved with generate returns to the equity sponsors in the 20%-30% area. However, it should be noted that these returns are based on numerous assumptions including the utilization of debt capital to finance 70% - 75% of total project costs.

In summary, I believe the equity capital for the synthetic fuels projects of the 1980's will come primarily from the larger corporations. The sheer magnitude of the investments required and the relatively long period of time between the actual dollar investment and the realization of cash returns will discourage the involvement of the smaller, yet more numerous sources of equity capital, be they corporations, institutions, or individuals.

Before going on to the sources of debt capital, one more point should be mentioned. The costs of most synthetic fuels projects are so large that multi-party ownership will be required as it is today for such projects as the Alaskan Gas Pipeline and the nuclear generating stations. For many of America's largest corporations, this is not a concept that they are comfortable with. However, it is a reality and creativity will be required to design a project management structure to synchronize the various "wants and desires" of several strong-willed corporate partners.

The debt capital will come from the traditional sources. Such sources include commercial banks, insurance companies, and public and private pension funds. At the pace which synthetic fuels projects are likely to develop, I do not believe that there will be any shortage of debt capital from these sources. Therefore, availability of capital is not the critical issue.

The more interesting issues are the forms of credit support required by the institutional lenders and the cost of the debt. All of these institutions have fiduciary responsibilities and are therefore willing to assume only minimal risks in their fixed income investments.

As was mentioned earlier in my remarks, I do not believe that the traditional forms of credit support for a project financing will be available for most synthetic fuels projects. First, most project sponsors will not be willing to expose their corporate credit through guarantees of debt securities because of the already large exposure as represented by their equity investment. Second, lenders will not be convinced that a project's financial results are adequate regardless of the projected interest and debt service coverage ratios because such results are predicated on a whole series of assumptions about completion costs, start-up dates, operating efficiencies, product prices and operating costs. Given the application of a new technology to a commercial scale project and the volatility in energy prices, it should not be surprising that lending institutions demand more. Third, during the early stages of construction when debt capital is needed, it will be difficult to arrange "take or pay" product contracts because of the uncertainty of

the date of commercial operation, the quality of the product and the price of the project's products relative to the alternatives.

~~Therefore, at this early stage of development of the synthetic~~ fuels industry, I believe the Federal government acting through the United States Synthetic Fuels Corporation is integral as a provider of credit support if meaningful quantities of synthetic fuels are to be produced in this decade.

The form of credit support most easily understood which is available to the Synthetic Fuels Corporation is the loan guarantee. There is little doubt in my mind that an unconditional guarantee by the U.S. Government with no recourse to the equity sponsors provides the necessary credit support to attract all the required debt capital. Unlike price guarantees and purchase commitments, loan guarantees also neutralize the risks of non-completion. However, if the non-completion risk can be assumed by other creditworthy parties, such as the equity sponsors, process licensors, or the design/construction firms, then price guarantees and purchase commitments will provide the necessary credit support to permit debt financing on an unguaranteed basis.

However, one should not expect that such debt capital will cost significantly less than the debt that most large creditworthy corporations can raise on their own. In fact, it may cost more initially. In today's capital markets, such debt would likely carry a 16% effective interest cost. This estimate is arrived at by starting with the current market rate for long-term Treasury bonds of 14%, adding 125 basis points or 1.25% for the indirect nature of the government's guarantee, 25 basis points for the novelty factor and 50 basis points for the annual guarantee fee to be charged by the Synthetic Fuels Corporation. Most "AAA" and "AA" rated industrial companies can sell long-term debt securities in today's environment at rates below 16%. But if the guaranteed loans provided by the Synthetic Fuels Corporation are truly non-recourse to the equity sponsors, the slightly higher interest costs will be well worth the differential.

Over the longer term, as the capital markets absorb the first few issues of Synthetic Fuels Corporation guaranteed debt and become familiar with the terms and conditions of the debt, I would expect that the 25 basis points premium for the novelty factor will decline to zero and hopefully the 125 basis point differential for the indirect nature of the government's obligation will decline somewhat as well.

The above scenario is based on my assumption that the terms and conditions of the guarantee will become standardized for all issuers of Synthetic Fuels Corporation guaranteed debt as they have for issuers under the Maritime Administration's Title XI ship financing program. It will be foolish for project sponsors and the Synthetic Fuels Corporation to negotiate unique terms for each project given the higher costs which would be demanded by the capital markets. The capital market participants are creatures of habit. If they have seen a set of terms and conditions before, they understand them and will require an interest rate accordingly. If the terms and conditions are new and different, they will study them and charge a higher rate reflecting their increased effort and aversion to new wrinkles. Clearly, I have overstated the case to make my point.

I would like to leave you with my assessment of the viability of the synthetic fuels industry. It is fragile right now for several reasons: uncertainty surrounding the commitment of the Reagan Administration despite their assurances and the new euphoria about the prices and availability of our traditional energy sources created by a temporary gas bubble, an oil glut and OPEC oil price freezes. Hopefully, everyone's memory is good enough to recall that we felt this same sense of euphoria just four years ago. However, since 1977 oil prices have increased 135% and there were shortages created in certain parts of the world when Iran and Iraq went to war. Given conditions in the world, it will probably happen again. When it does, it could be tragic if synthetic fuels is once again sitting on the back burner. But, the future of synfuels does not rest on potential economic and political disruptions around the world. If oil and natural gas prices escalate at a rate of 1% - 3% over the base inflation rate as most energy forecasters are predicting, the production of synthetic fuels will be cost competitive with our traditional fuels.

Therefore, let us hope that the Federal government and the private sector in this country do not let their long-term goals and aspirations be side-tracked by short-term events. If we are to have synthetic fuels in the 1980's, commitments by both industry and government need to be made now -- not a year or two down the road.