

NATIONAL PETROLEUM COUNCIL

INTERIM REPORT OF THE
SUBCOMMITTEE ON SYNTHETIC PRODUCTION COSTS
OF THE
COMMITTEE ON SYNTHETIC LIQUID FUELS PRODUCTION COSTS
DECEMBER 5, 1950

HEADQUARTERS

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In his letter of April 21, 1950 to Mr. Walter S. Hallanan, Chairman of the National Petroleum Council, Secretary of Interior Oscar L. Chapman requested the creation of a National Petroleum Council committee to (1) review the estimates made by the Bureau of Mines for the costs of producing synthetic liquid fuels, (2) prepare independent cost estimates, and (3) make recommendations as to ways and means, if any, for an improvement of future cost estimates by the Bureau of Mines.

The National Petroleum Council appointed a Committee on Synthetic Liquid Fuels Production Costs with Mr. W. S. S. Rodgers as Chairman. It was decided by this Committee to form a subcommittee composed of men who would do the necessary work leading to the preparation of a report for submission to the Council. Mr. Rodgers appointed Mr. A. P. Frame as Chairman of the Subcommittee. To carry out the intent of the assignment, it was decided by the Subcommittee to limit its work as far as possible to processes upon which the Bureau of Mines cost data have been or will be based. It was not believed to be the function of the Subcommittee to compare such results with those based on alternative processes that may have been developed by industry.

The Subcommittee held its initial meeting on July 18th. It subdivided the responsibility among four working committees: Raw Materials, Process Engineering, Mechanical Engineering, and Economics. The first three of these committees have further divided the assignments among three groups: Coal Hydrogenation, Coal Gasification, and Shale Oil, these being the three synthetic fuel processes being

developed by the Bureau. To convey some idea of the scope of the investigation, at the present time some fifty people, representing sixteen companies, are actively at work on some phase of the investigation. An estimated ten thousand man-hours of work have already been put in with a great deal of work yet to do. There have been some twenty committee meetings already held during the past three months and numerous extended visits made by various groups to the Bureau installations at Rifle, Colorado; Louisiana, Missouri; Bruceton, Pennsylvania and Morgantown, West Virginia.

In order for the Subcommittee to review the estimates made by the Bureau of Mines for the cost of producing synthetic liquid fuels, it has been necessary for the various subcommittees to review in detail the experimental and development data of the Bureau on which its cost estimates have been, or will be, prepared. Furthermore, rather than the Subcommittee preparing independent cost estimates it was felt that it would be possible, by working closely with the Bureau of Mines personnel, to develop estimated costs of producing synthetic liquid fuels upon which there would be agreement between the Bureau and the industry, at least as far as the basic technical data was concerned. It has been the intention of the Subcommittee to be helpful and constructive rather than critical. In technical projects based upon anything less than large scale commercial experience there are certain to be some controversial areas but a successful attempt is being made to reduce these areas to a minimum. Without the cordial collaboration of the Bureau of Mines this analysis could not be made.

This cooperative approach has been partly responsible for a delay in the completion date of the study which was originally

estimated as January 1951. It now appears that it will be July 1951 before a final report can be submitted. A second important factor in this delay is the fact that the Bureau has not yet actually prepared finished estimates for all three methods of producing synthetic liquid fuels. Only in the case of the coal hydrogenation process did they have a complete estimate and this is the only estimate on which publication has been made. The coal gasification and shale oil estimates are still in the process of being prepared. Our several subcommittees are collaborating with the Bureau personnel on the preparation of these latter studies to assure, as discussed earlier, that all technical differences are resolved, if possible, before publication.

To insure that a truly authoritative answer is forthcoming from these studies the Subcommittee has directed the working committees to prepare several alternate cases. The first will be the cost of synthetic fuels if plants were to be built today. The second alternate will be a forecast as to the future cost of such fuels assuming that known technological improvement possibilities materialize as a result of continued research and development work. In addition, an estimate will be made of the cost of synthetic fuels from the first few plants which may be exceptionally favorably located as to raw materials, water, markets, etc., and which may be able to realize certain chemical by-product credits. A more nearly average cost estimate will be prepared for a synthetic fuel industry of approximately 250,000 barrels per day.

The Subcommittee regrets that it will not be able to make a final report before the middle of 1951 but is unanimous in its opinion that a completion of the report now contemplated will provide both government and industry with an authoritative evaluation of the cost of producing synthetic liquid fuels from coal and

shale by the Bureau of Mines processes based on present developments, and what may reasonably be expected within the next five or ten years. It is further hoped that this report and its findings will be accepted by the industry personnel and by the Bureau of Mines people. If this hope materializes the report should be of definite value, both to government and to industry, as indicating the probable future of synthetic liquid fuels in the field of the energy market.

Respectfully Submitted,

A. P. Frame, Chairman,
Subcommittee on Synthetic
Production Costs.

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