

INTERIM REPORT OF THE
NATIONAL PETROLEUM COUNCIL'S
COMMITTEE ON SYNTHETIC LIQUID
FUELS PRODUCTION COSTS

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COMMITTEE ON SYNTHETIC FUELS

There has been no meeting of the Committee on Synthetic Fuels since the last Interim Report submitted December 5, 1950. The Subcommittee on Synthetic Fuels has continued to hold meetings, and I am pleased to report that considerable progress has been attained in the interim, despite the magnitude of the task. Our group has included working subcommittees comprised of 42 members, representing some nineteen companies. In addition, approximately 85 engineers and skilled technical personnel have devoted considerable time and effort to the Subcommittee's activities.

In our previous report to this Committee, we advised you that we would endeavor to establish the cost of synthetic fuels as produced by three processes - coal hydrogenation, coal gasification and fuel synthesis, and shale oil refining. In addition, for each of these basic processes, we would establish the so-called first plant cost and the industry-wide plant cost, that is, the average cost for the necessary plants to provide 250,000 barrels per day production. And further, that we would work up a present day or established cost, that is, one based on presently developed processes, and secondly, a future or optimistic cost which would allow for possible technological research improvements which might be forthcoming in the next five to ten years.

It became evident, after several months of activity, that the time and work involved in preparing each separate case, obtaining the necessary data from the Bureau of Mines and reviewing our results with the Bureau of Mines to clear up any major differences, necessitated reducing the number of cases to expedite the work. The

cases selected for presentation in the initial report which we hope will be available to the National Petroleum Council in September, include only the first plant and industry-wide cases for the present day or established coal hydrogenation and shale oil processes. The future or optimistic cases for these processes and all of the cases for the coal gasification and fuel synthesis process are presently deferred, but will be included in a second report.

The Subcommittee work has been divided among four working committees--Raw Materials, Process, Engineering, and Economics. The status of each committee's work is briefly as follows:

The Raw Materials group has essentially completed its assignment of establishing the availability of shale and coal for specific plant sites, and the cost and quality of these raw materials. Bureau of Mines and NPC personnel are essentially in agreement on availability, cost and quality of oil shale and western coals, but the cost and quality of eastern coals remains an area of disagreement. Every effort is being made to reconcile this difference, but it is presently questionable whether this will be accomplished.

The Process Committee has critically reviewed the Bureau of Mines processes and industry processes made available to the Bureau of Mines for coal hydrogenation and oil shale operations, and has now completed its assignment of calculating raw material requirements, equipment sizes, etc.

The Engineering Committee, whose function it is to develop investment costs for plants and all off-site facilities, has its assignment approximately fifty percent complete on the initial projects. It is presently indicated that this phase of the work will be completed by July 15.

A newly formed Economics Committee was set up during the past month. Its function is to assemble and integrate the data from the Raw Materials, Process and Engineering groups to develop the final operating and investment costs for synthetic fuel plants. This group is currently making a test or "dry run" on the most nearly completed case, that is the Rock Springs Coal hydrogenation case. It is hoped that this group will finish its work by August 15.

The Subcommittee believes that the time, manpower, and energy being devoted to this entire assignment will provide both industry and government with an authoritative evaluation of the cost of producing synthetic liquid fuels from coal and shale.