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POLISH FUEL AND OIL POLICIES CRITICIZED

Summary: Two Polish petrochemical engineers have criticized Poland's current fuel policies. They have recommended that Poland avail herself of new sources of light crude oil in North Africa and introduce a different technology in petroleum refining. Without such changes in policy, Poland's synthetic fiber and plastics industries will be at a disadvantage in world markets, and the costs of agricultural production and of the contemplated expansion of motor transport will be much higher.

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Two Polish petrochemical specialists, Ludwik Bednarz and Andrzej Czerkowski, have seriously questioned (1) the wisdom of their country's perspective fuel policies and the advisability of expanding Poland's petrochemical industry on the basis of increased deliveries of poor-quality, Soviet-type crude oil.

According to the two engineers, Poland has deliberately chosen to refine crude petroleum by the more expensive "deep-processing" method, which yields very small quantities of fuel oil. The motivation behind this policy is to protect the coal industry, now the major source of fuel for the production of power, against the cheaper and more competitive heating oil.

(1) In an article entitled "Petroleum Governs Economic Intensity," Nafta, July 1970, pp. 193-197.

The deep-processing method selected by Poland for use until 1975 envisages a yield of about 25 per cent of heating oil. This figure is considerably below that produced in other countries during 1968: 55 per cent in West Germany, 56 per cent in France, 51 per cent in Great Britain, 40.7 per cent in Czechoslovakia, 37 per cent in East Germany, and 34.5 per cent in the Soviet Union. The difference in investment costs between deep-processing and shallow-processing is in the range of two to three times higher for the former. The cost of benzine, the main raw material used to manufacture synthetic fibers and plastics, is doubled under the deep-processing method. The cost of producing liquid fuels for motor vehicles and tractors is also much higher.

The consequences of Poland's policy of protecting the coal industry are (1) increased costs for all who use electric power; (2) placing Poland's petrochemical industry at a competitive disadvantage on world markets, particularly for synthetic fiber and plastic products, for which most of the production costs consist of raw materials; and (3) increasing the costs of agricultural production and of the contemplated expansion of motor transport.

According to Bednarz and Czerkowski, two major alternatives are available to Poland if she wishes to reduce the production costs of petroleum refining. One of these is to continue to use medium-quality oil of the Romaszkinska type (supplied by the Soviet Union) and similar crude petroleum to be found in Iran, Kuwait, and other countries of the Arabian peninsula, and "to reduce the depth of oil processing on a national scale during the next five-year period." This would result in the production of a higher proportion of heating oils, and would necessitate a change in Poland's policy of regarding coal as the major source of fuel for electric power production. The second alternative would be to buy the more expensive light oils found in Libya, Algeria, Nigeria, and Egypt. The higher cost of crude oil would be more than offset by the smaller investments needed and the lower production costs. These light oils are more suitable for shallow processing, and would yield larger quantities of motor fuels and benzinous raw materials, both of which are needed in large quantities if Poland's petrochemical policy and motorization program are to be implemented economically. At the same

time the quantity of heating oil produced would still be relatively low, permitting the continued protection of coal mining. But in order to buy a greater amount of the crude oil she needs from countries supplying the lighter oil, Poland would have to improve the quality of her manufactured commodities, which could then be sold on world markets thanks to low production costs. Greater specialization in production and co-operation among Comecon countries would, according to the two engineers, enable Poland to "join the international, worldwide division of labor." Poland's participation in this division of labor should "ensure her", among other things, the needed amount of inexpensive but high-quality oil." Without cheap petrochemical raw materials it would be difficult for Poland to carry out her program of developing a more "intensive" economy.

In addition to opposing the method of petroleum refining to be employed in Poland until 1975, Bednarz and Czerkawski were critical of the projected oil consumption figures selected by the planners as targets for 1980. According to them, the 22-million-ton figure set for that year is much too low. In view of the increasing demands of the petrochemical industry, agriculture, and other economic branches, the 1980 target, they said, should be in the range of 26-30 million tons.

In reviewing Poland's petroleum policy the two engineers indicated the principles adopted by the Comecon Permanent Commission for the Petroleum and Gas Industry. They reported that the Commission has recommended that each Comecon country process the amount of crude oil needed to meet its requirements for large-scale production of petroleum products. Specialization is to prevail in the manufacture of those petroleum products which each country requires only in small amounts, or which require "unique technologies" in their manufacture. Thus the petroleum policy recommended by Comecon, the need to produce petrochemical raw materials cheaply -- and thereby assure the production of commodities from these raw materials at low cost, making them competitive on world markets -- and the simultaneous protection of Poland's coal mining industry would require Poland to change her petroleum policies. Such a change would necessitate (1) buying more crude oil from North African sources, and (2) exchanging Poland's present oil refining technology for the new oil refining facilities commissioned during the next five-year period and thereafter.

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