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INFORMATION MEMO

Natural gas in the EEC: problems and prospects
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Natural gas will have an important role to play in coming years in the EEC; supplies will increase following new discoveries in the Netherlands and Germany, prospecting is under way in the North Sea and imports from outside the Community have already begun and are likely to expand.

The EEC Commission has made a study of the problems the new trend may pose and has submitted the results of this work to the responsible authorities of the Member States. A preliminary examination of questions of common concern which may arise has thus begun.

The Study has now been published under the title "Natural gas in the EEC: problems and prospects".

On a conservative estimate made at the end of 1963⁽¹⁾, proven reserves of natural gas in the Member States totalled 1 500 000 million cubic metres: Netherlands, 1 100 000 million cubic metres; France, 148 000 million cubic metres; Italy, 130 000 million cubic metres; Germany, 105 000 million cubic metres. The thermal equivalent of this quantity of gas represents nearly 3 1/2 times the consumption of primary energy in 1962 in the Community and about 7 times the output of coal in the same year.

The Groningen deposit in the Netherlands is the biggest in the Community and one of the biggest in the world. It is estimated that it will yield 30 to 35 000 million cubic metres a year, about half of which will be consumed in the Netherlands and the rest exported. Oil companies, the Netherlands Government, and the "Staatsmijnen in Limburg" Coal Company are participating in a consortium which has been set up to handle extraction, transport and sales. The construction of a transport network has been begun and the objective is that the Groningen deposit should eventually supply the whole country. Prices have been fixed so that it will be economic to use gas for heating purposes and so that the cost to industry will be reasonable.

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(1) In certain countries new estimates have since been made.

In France, the Lacq installations are now producing a steady 5 000 million cubic metres per year. In Italy the yield from deposits in the Po Valley is expected to decline gradually; on the other hand, the exploitation of deposits discovered in recent years in central and southern Italy and in Sicily has now begun.

In Germany, natural gas was of little importance until recently, but discoveries have brought reserves to a level near those of France and Italy.

The search for new sources is being vigorously pursued in several Community countries. Results of surveys in the Netherlands and Germany and on the North Sea continental shelf suggest that large quantities of gas may exist in these areas.

In addition to the deposits available to the member countries, several non-member countries have deposits which could supply gas to the Community. The nearest are in Algeria and Libya, but the importation of gas from the Middle East or Venezuela is by no means out of the question.

Gas from the Algerian deposits at Hassi R'Mel is now being used; the United Kingdom has imported supplies from this source since the autumn of 1964. The gas is transported in liquid form in methane tankers. Deliveries to France will begin in March 1965. The construction of an underwater pipeline is planned for the not-too-distant future. In ten or fifteen years Europe may be importing 20 to 30 000 million cubic metres of natural gas per year.

Studies have also been made of the transport of natural gas from the Middle East to Europe by pipeline, but the greater proximity of the Sahara and the recent discovery of large reserves of gas in Europe make it doubtful whether such plans would be worth while.

The transport of gas by ship from Libya, the Persian Gulf, the eastern shores of the Mediterranean and Venezuela is also being considered.

Given the proven reserves it is proposed to exploit and the prospects of importing gas from outside the Community, a reasonable estimate is that the Community countries will dispose in about ten years of not less than 70 000 million cubic metres of natural gas per year, representing about 85 million TCE (1).

(1) Tons of hard coal equivalent at 7 000 kcal/kg.

If, to obtain a clearer picture, we suppose that this quantity will be available as early as 1975, natural gas will probably then account for at least 10% of the Community's overall primary energy requirements. In view of developments in other parts of the world endowed with natural gas, this figure is probably not too high provided output expands and the new fuel replaces conventional fuels to the extent expected.

Nobody knows how much gas lies in deposits in the Community or in particular how much will be found under the North Sea, so that there is no way of estimating how much will eventually become available. But in any case natural gas is bound to make a noteworthy contribution to Community fuel supplies.

An important factor in the future pattern of contributions from the various sources is that the natural markets for gas from the north of the Community and for gas from the Sahara Desert are very different in character. Groningen is near the main industrial areas of Europe, which are densely populated and in general have high standards of living. These are also the areas which produce virtually all the Community's coal. Most of the areas which can be served by Algerian gas are more sparsely populated and economically less advanced.

But in any event the introduction of natural gas is bound to affect the conventional gas industry and the coking industry. It is true that in the first instance natural gas will be piped through the national grid mixed with town gas where there are ample supplies of the latter. But in many cases the grids will be adapted for the transport of natural gas only, the calorific value of which is nearly double that of town gas. This will mean improved efficiency for installations.

Some town gas is a by-product of other manufacturing processes. This situation will inevitably continue and the gas will have to be sold to local industries having heavy fuel requirements, though in all likelihood at a substantially lower price.

The impact of the emergence of this new energy source on other forms of primary energy will vary from industry to industry. The effects of the penetration of natural gas on the coal and oil markets will largely depend on the price policy pursued by gas suppliers. If a price alignment policy is pursued, natural gas will probably replace other forms of energy on a large scale.

For household use , it will be possible for imports of qualities of coal which are becoming scarce in the Community to be scaled down. In industry, oil products, notably fuel oil, and coal will meet competition from natural gas. Natural gas may even encroach on two fields until now regarded as guaranteed markets for Community coal output, the steel industry and electric power stations, although in the latter case the geographical situation of the coalfields may give them a marked advantage.

One last point is that with the invasion of the energy market by natural gas and the consequent irreversible changes in equipment, the question of security of supply becomes extremely important. Where gas is imported from non-member countries, assurances must be obtained that supplies will not be interrupted.

It will be appreciated that the expansion of natural gas supplies in the Community raises problems of economic policy which cannot be solved without reference to other industries: it must be related, in particular, to the requirements of energy policy and regional policy.

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The work is illustrated by graphs and a map in colour showing the main gas deposits in the Member States and neighbouring countries, their gas grids and the routes of natural gas pipelines under construction or planned.