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## ENERGY

# Soviet Natural Gas – A Threat to Western Europe's Security?

by Klaus Matthies, Hamburg\*

**The gas-pipeline deal planned between the Soviet Union and several Western European countries has met with objections from the US government, which fears that Western Europe could be politically blackmailed as a result of its increasing dependence on energy supplies from the USSR. Are these fears justified? Are there any realistic alternatives open to the countries concerned?**

Following the oil embargo imposed on the USA and the Netherlands at the end of 1973 by the OAPEC countries, the industrialised countries began to realise the risk involved in being heavily dependent on energy imports from regionally concentrated sources. They have since then not only been trying to improve energy efficiency – even more so following the second wave of price increases –, but also to decrease the share of imported fuels in total energy requirements. This they have tried to do by extending indigenous production of energy and by substituting other sources of energy for oil. Since this can only be achieved in the long run, industrialised countries are eager to replace the critical part of energy supplies by sources which are politically and economically more dependable.

Altogether, imports make up half of Western Europe's energy supply. Their weight is particularly high in the case of oil, of which Western Europe had to import 90 % of its requirements in 1980. 64 % of these oil imports came from the OPEC countries, in the case of crude oil alone as much as 80 %<sup>1</sup>.

Western Europe's supply situation regarding natural gas is much more favourable than in the case of oil; almost 90 % of natural gas supplies come from indigenous production. This large degree of self-sufficiency is primarily a result of extensive production by the Netherlands, who still cater for over 60 % of

Western Europe's total production and almost half of its gas consumption. Dutch production has, however, probably reached its maximum level by now. The Dutch government has been pursuing a policy of spinning out the reserves for several years now and is indeed trying to secure gas supplies from other countries. A prolongation of expiring export contracts is very unlikely. Dutch gas exports will thus steadily decline after 1985.

Western Europe's natural-gas production will very probably only undergo a marginal increase<sup>2</sup>. The increase in requirements will therefore have to be covered more and more by imports from third countries. Potential supplier countries in the coming years, i. e. before the end of the decade, are above all the Soviet Union as well as countries in Northern Africa and in the Middle East, most of them belonging to OPEC; all of them have large reserves of natural gas at their disposal. European consumers are, however, here competing with other importing countries such as Japan. Transport problems and high costs, particularly for liquefied gas projects, present additional obstacles to supplies on a large scale. Last but not least, political developments may represent a decisive blocking factor, examples for this being the fates of projects in Iran and Algeria.

<sup>1</sup> Cf. OECD: Quarterly Oil Statistics, 1981, No. 2.

<sup>2</sup> Cf. OECD: Energy Policies and Programmes of IEA Countries, 1980 Review, Paris 1981, p. 41 f.

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Table 1

**Share of Imports in Energy Consumption in  
Western Europe, 1979**

Country	Gas <sup>a</sup>	Oil <sup>a</sup>	TPE <sup>a</sup>	Gas/TPE <sup>b</sup>
OECD Europe	13	90	51	2
West Germany	66	100	57	11
Netherlands	c	100	6	c
Belgium	101	104	88	20
France	69	98	75	7
Italy	53	103	82	9
Austria	59	90	61	9
Switzerland	101	103	58	3
7 countries	23	100	64	4

TPE = Total primary energy consumption

<sup>a</sup> net imports (less bunkers) as percent of consumption

<sup>b</sup> net gas imports as per cent of TPE

<sup>c</sup> net exports

SOURCE: OECD: Energy Balances of OECD Countries 1975/1979

### Increased Diversification of Supplies

For these reasons the gas-pipeline agreement planned between the Soviet Union and certain Western European countries (Italy, France, Belgium, the Netherlands, West Germany, Austria and Switzerland) is viewed by the latter as an important contribution towards diversifying the structure of supplies in the energy sector and thus increasing the security of such supplies. Western Europe already purchased more than 25 bn cubic metres of Soviet natural gas in 1980. The extensive Soviet reserves available would allow a considerable expansion in exports. The new project, which was suggested following the failure of the Iran-Soviet gas exchange deal, envisages increasing deliveries of Soviet gas beginning in the mid-80's. The ultimate target, which will probably not be reached until the end of the decade<sup>3</sup>, is annual supplies of 40 bn cubic metres, almost a third of this (12 bn cubic metres) going to West Germany. The contractual duration is to be twenty years. As opposed, for example, to liquefied gas projects in Nigeria or Algeria, Western parties do not have to assume an investment risk. Western firms will receive the orders for the delivery of material worth DM 20 bn, (steel pipes, compressor stations) for the construction of a 5,000 kilometre pipeline from Northwest Siberia, a project with an investment totalling DM 30 bn; West German firms will have the largest share, probably receiving approximately half this amount. The intention is for Western banks to finance the project by means of credits, which should then start being paid back in the mid-80's with the aid of natural gas exports.

### Objections by the US Administration

The financing of the pipeline construction would no longer appear to be a major problem since a Dutch banking consortium has negotiated credit terms for its share with the Soviet authorities concerned and the German banks have also established a "far-reaching" agreement in this matter<sup>4</sup>. There are, however, still political objections to the project. Various sources have expressed their misgivings concerning the extent of the additional supplies, for the Soviet Union could subsequently become an important, if not the most important, supplier of natural gas to the Western participants in the agreement. The strongest objections have been raised by the US government, which fears that Western Europe could be politically blackmailed as a result of its increasing dependence on energy supplies from the Soviet Union.

Up to now the Soviet Union has always met its contractual obligations for deliveries of gas. The temporary reductions in supplies that occurred during the winter months were a result of the extreme climatic conditions and cannot be excluded – just as fluctuations in Norwegian supplies cannot be excluded – in future. Nobody can predict whether or not the Soviet Union will at a later stage threaten, or indeed impose, a ban on supplies for politically motivated reasons. However, considering the degree of the Soviet Union's own interest in lasting cooperation with Western countries, a cut-off in supplies seems at present less likely than, for example, the loss of one of the major OPEC suppliers.

### Effectiveness of a Soviet "Embargo"

How effective a "gas embargo" by the Soviet Union would be must be measured according to its position on the Western European energy market. In 1979 approximately 12 % of available natural gas was of Soviet origin; in West Germany's case it was 17 %, corresponding to 2 or 3 % of primary energy consumption. Including Soviet oil supplies the percentage rises to 6-7 %. During the course of the 80s, however, a considerable reduction or even a complete termination of Soviet oil supplies to Western Europe is expected. According to projections the percentage of gas consumption met by Soviet supplies could be doubled by the end of the decade. This would

<sup>3</sup> Cf. Pipeline suppliers line up for \$ 8 billion, in: Business Week, August 10, 1981, p. 27.

<sup>4</sup> Moskau akzeptiert höheren Zins im Röhrengeschäft (Moscow accepts higher interest rate for pipeline agreement), in: Handelsblatt, July 10, 1981; Russen-Gas-Kredit mit Holland perfekt (Dutch gas credits for Russia in the bag), in: Handelsblatt, August 13, 1981.

take its share of energy consumption up to 5-6 %. In comparison: oil supplies from Saudi Arabia and Libya covered about 12 % and 6 % respectively of West German's energy consumption in 1980 and Western Europe as a whole received 16 % and 5 % of its primary energy from Saudi Arabia and Iraq respectively. Thus the Soviet Union's capacity to blackmail European countries would be kept within bounds. However, the relatively low contribution of Soviet gas to energy consumption does not imply that a ban on deliveries would not have a critical effect upon the energy supply in certain sectors. The main thing here is to expand upon provisions already made to cope with the consequences of a disruption in supplies by installing bivalent furnaces, by extending natural-gas storage and by concluding flexible contracts with the industrial consumers of gas<sup>5</sup>.

In order to be able to assess the implications of a suspension of Soviet natural gas supplies, we should examine the possibilities offered by the alternatives to the use of Soviet gas suggested – albeit in a rather vague form – so far. At the economic summit in Ottawa

<sup>5</sup> Cf. H. W. Maull: Erdgas und wirtschaftliche Sicherheit (Natural gas and economic security), Arbeitspapiere zur internationalen Politik 17, Bonn 1981, p. 52 ff.

the US government undertook to make suggestions in this direction in the hope of deterring the Europeans from signing the contract. As of yet coal, oil and natural gas from the USA, Norwegian natural gas and an increased utilization of nuclear energy were put forward as alternatives; however, up to now there have been no concrete proposals<sup>6</sup>.

### Dubious Options

Increased exportation of American coal would, for a start, necessitate increased efforts to expand the American East Coast ports. But above all the use of coal as a direct substitute for natural gas on a large scale pre-supposes the construction of coal gasification plants. Industry, however, would not at the moment seem willing to push forward with large scale synfuel development, since the costs of producing gas from coal are likely to remain above the price of natural gas for some time to come. Initial optimism as regards its profitability before the end of this decade has willowed away, the rise in investment costs and in the price of coal being major reasons. Synthetic gas is not likely to

<sup>6</sup> Cf. Die Amerikaner suchen nach Alternativen für die Erdgasleitung (The Americans are searching for alternatives to the natural-gas pipeline), in: Frankfurter Allgemeine, August 18, 1981.

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play an appreciable part in the supply of energy, at least not during the 80's. Even if the price of coal were to increase at a significantly slower pace than the price of gas, a large scale industrial synthetic substitution of natural gas would seem very unlikely within this decade. This is both due to lengthy lead times and to the unsolved technical and environmental problems.

As regards other alternatives to imports of gas from the Soviet Union it is very doubtful whether the USA will be in a position to make oil or natural gas available for exportation to Europe within the coming years. At present the USA is still the world's biggest oil importer. Norwegian gas on the other hand will increasingly be delivered to other European countries even following a successful completion of the gas deal with the Soviet Union. Norway's appreciable reserves, which will very probably increase even further in future, would enable it to increase its gas production to such an extent as to make supplies of Soviet gas at least partly superfluous. The maximum output, however, is not determined by the reserves available but by the energy policy of the

Norwegian government. The latter supports a gradual expansion in production so as to limit the adverse economic, social and ecological effects associated with the production of oil and gas. The chances of Norway voluntarily replacing the Soviet Union to a significant extent as a supplier of gas are therefore slight.

Finally, extension of the construction of nuclear power plants in Western Europe has, with the exception of France, already fallen behind the targets set by the electricity supply industry. It is hard to conceive how construction could be accelerated so as to enable electricity generated by nuclear energy to replace Soviet natural gas. An indication of the dimensions involved here is given by the fact that a total replacement of additional Soviet gas for heating purposes would require the construction of 11 more 1300 mw power plants in the Federal Republic of Germany<sup>7</sup>.

### No Realistic Alternative

All these make-shift solutions thus present no realistic alternative to Soviet natural gas, at least as far as the 80's are concerned. The only real alternative on the energy supply side for the coming years would be oil from the Middle East. However, due to the already very high concentration of energy supplies from this region known for its political instability it is hardly refutable that every new source of supplies elsewhere represents a lessening of the risks involved. The planned increase in imports of Soviet natural gas admittedly greatly increases European dependency on gas supplies from the Soviet Union. At the same time, however, it represents a step towards a more balanced distribution of the supply sources of fuels. To drop the natural-gas agreement would mean creating a further concentration of supply sources and enhancing the risk to such supplies.

Independent of the natural-gas agreement Western Europe is going to have to live with the risks inherently attached to a high level of imports of fuels for some time to come. Considering the limited possibilities for increasing energy production within Europe, a consistent policy of energy conservation would seem to offer one of the best ways of coming to terms with the situation. Pending the success of such a policy, however, one can only hope that a mutual interest in lasting trade relations which are to the advantage of all concerned will secure adherence to supply contracts signed.

**Table 2**

### World Reserves and Production of Natural Gas 1980

– billion cubic metres<sup>a</sup> –

Country/Region	Reserves <sup>b</sup>	Production	Static Life-time (years)
Western Europe	4420 (6)	197.7 (12)	22
Netherlands	1560	88.0	18
Norway	1210	33.0	37
United Kingdom	700	35.4	20
Germany	315	19.0	17
France	170	7.6	22
Italy	100	11.6	9
Austria	10	2.1	5
Africa	5910 (8)	31.0 (2)	191
Algeria	3730	23.0	162
Nigeria	1160	2.5	464
Middle East	21310 (28)	38.3 (2)	556
Iran	13730	8.0	1716
Saudi Arabia	3110	8.8	353
North America	7880 (11)	650.8 (40)	12
USA	5410	576.8	9
Canada	2470	74.0	33
Latin America	4520 (6)	64.3 (4)	70
Mexico	1830	27.0	68
Venezuela	1190	14.7	81
S.E. Asia/Australia	3660 (5)	46.8 (3)	78
Socialist Countries	27280 (36)	588.2 (36)	46
USSR	26050	433.0	60
World	74980 (100)	1617.1 (100)	46

<sup>a</sup> Figures in brackets are percentages

<sup>b</sup> proved recoverable reserves

Source: Esso AG: Oeldorado 80

<sup>7</sup> Cf. H. Radzio: Russisches Roulette – mit Erdgas? (Russian Roulette – with natural gas?), in: Handelsblatt, February 6, 1981.