

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL
CONCERNING NATURAL GAS

COM(81) 530 final

SUMMARY AND CONCLUSIONS

1. Natural gas has a growing role to play in the context of the Community's evolving energy strategy.
2. The use of natural gas has developed rapidly following the discovery of the huge Groningen field in the Netherlands and subsequent North Sea finds. This early growth was based on secure supplies at competitive prices.
3. Forecasts suggest that the rate of growth will moderate although the share of total energy needs met by natural gas will increase slightly from the current figure of 18 % to 19% by 1990.
4. The Community production of natural gas has declined from the peak level reached in 1976 and a further slight decline is expected by 1990. Increasingly consumption is being met by imports from third countries.
5. Imports accounted for 26% of total supplies in 1980 and are forecast to reach 35% by 1985 and about 46% by 1990. These figures are significantly higher for certain Member States.
6. The diversity of countries from which the Community imports natural gas is very small. Algeria, Norway and the USSR accounted for 97% of Community imports in 1980 (the remaining imports are accounted for by Libyan deliveries to Italy) and despite the possibility of new imports from other countries, they will continue to account for most imports in the foreseeable future.
7. As the proportion of imported gas has grown so associated problems have begun to emerge. In particular the demand for natural gas price parity with crude oil (f.o.b.) by Algeria resulted in a temporary suspension of deliveries to France (and the US). Similar demands have been made against Italy which is committed to Algerian supplies by the Trans-Mediterranean pipeline nearing completion, and an agreed contract with undertakings in the Netherlands and the Federal Republic has been abandoned because of Algerian unwillingness to invest in the extra liquefaction plant, preferring delivery by pipeline. Libyan deliveries to Italy were also interrupted at the beginning of 1981 following a failure to agree on prices.

8. Very large import contracts are currently under negotiation by undertakings in the Federal Republic of Germany, France, Italy, Belgium and the Netherlands with the Soviet Union. This increases the need to examine means of enhancing the security of supplies.
9. Because of the higher transportation and distribution costs associated with natural gas over its main competitor in the market place, oil, f.o.b. price parity with (crude) oil would make natural gas uncompetitive on the final consumers' market and its market share would be expected to fall.
10. An excessive price for natural gas would therefore make long distance importation contracts uneconomic to the potential loss of both importer and exporter.
11. If, through price rises or other difficulties, the share of energy needs met by natural gas fell, the substituted demand would be likely to fall mainly on oil.
12. The two main problems, therefore, which confront the gas industry in the Community and which are likely to become more acute in the future are price developments and the security of supplies.
13. The measures necessary to improve the security of natural gas supplies may be summarised as :
 - (i) measures to reduce the importance of a given external source of supply :
 - encourage indigenous production, exploration, development
 - diversification of imports
 - development of SNG (Synthetic Natural Gas).
 - (ii) measures to mitigate the short term effects of an interruption :
 - interruptible contracts
 - storage (gas or substitutes)
 - interconnection of transport networks
 - spare production capacity

14. Underlying all these measures and possibly the most important factor is the need for Community solidarity. Clearly Member States are better able to increase their security of natural gas supplies and deal with unreasonable price demands if there is cooperation and solidarity at Community level.

15. The Council is therefore asked to adopt the Draft Conclusions as set out in paras 49 and 50 of the Communication.

INTRODUCTION

1. The Commission submitted to the Council on 2nd June 1980 a Communication concerning Community action in the natural gas supply sector (doc. (80) 295 final) which was updated as at 21 November 1980. The present communication takes account of subsequent developments in the natural gas market, analyses the problems which the Community faces in regard to its supplies of natural gas, and outlines measures which should be taken in order to improve the security of supplies as well as to foster the use of gas. It should be seen in the context of an energy strategy which aims at diversifying away from oil, stimulating investment and the development of new technologies, reducing burdens on the balance of payments and maximising the level of employment.

DEVELOPMENT OF NATURAL GAS

2. The role played by natural gas in meeting in the Community's energy needs has grown rapidly following the discovery of the huge Groningen field in the Netherlands and subsequent North Sea finds. Figure 1 shows how this growth continued through the first oil crisis of 1973/4, encouraged by the competitive price of gas and its security of supply.
3. Consumption grew from about 153 milliards m^3 in 1973 to its peak in 1979 of 224 milliards m^3 . In 1980, however, consumption fell for the first time, to 219 milliards m^3 , although this still represented about 18% of primary energy requirements. The latest figures indicate that consumption for the Community has continued to fall, although the trend is not the same for all Member States. Apart from the influence of price developments which shall be examined later, there is also the differing impact of economic recession and, in the short term, the phasing in of new projects, and the interruption in LNG (Liquefied Natural Gas) supplies to France. For the future, the longer term difficulties are reflected in a reduction in consumption forecasts over the forecasts made last year, as illustrated in Figure 1.

4. The export of gas by the Netherlands and subsequent North Sea finds also helped to encourage the rapid growth of the continental gas transport system shown in Figure 2. Pipelines feed gas to all the Member States supplied by the Netherlands and link up to other pipelines bringing gas from the USSR as well as the LNG (Liquefied Natural Gas) terminals and the Trans Mediterranean pipeline bringing gas from Algeria.
5. Of the two continental Member States without a transport system, Denmark is developing its North Sea fields and constructing a gas grid whilst Greece is considering imports from either Algeria or the USSR.
6. Although not connected to the continental gas grid, the UK has experienced a similar growth in natural gas usage leading to an integrated national grid, firstly based on its own "Southern Basin" North Sea discoveries and increasingly on finds further north, including gas imported from the Norwegian sector. Whilst relatively small in Community terms, the reserves found in the Kinsale field off the South coast of Ireland which are currently used locally are planned to be supplied to Dublin and the possibility of a gas pipeline to Belfast, Northern Ireland is under active consideration at the moment.

The Advantages of Natural Gas

7. The considerable existing infrastructure this network represents is one of the advantages of natural gas. It is also transported unobtrusively and is environmentally attractive because of its cleanliness during use. It is a flexible and convenient fuel to use which also helps to explain its popularity in the domestic sector and in certain specialised industrial uses.

The Role of Natural Gas

8. The share of total energy requirements met by natural gas varies from almost one half in the Netherlands to about 9% in Ireland, as shown in Table 1. The low figure for France is due to the interruption in LNG deliveries from Algeria, the figure for 1979 being 11%. For the other major natural gas consuming countries, the Federal Republic of Germany, Italy, Belgium and the United Kingdom, the gas share is about 17%-20%. For the Community as a whole, this percentage is forecast to rise slightly from the current value of 18% to about 19% by 1990. This represents a slight lowering from last year's forecast value of 20% by 1990, mainly reflecting the difficulties over future gas import contracts. Nevertheless, even this modest increase in share between 1980 and 1990 represents an annual average compound rate of 3% and an absolute increase of 72 milliards m^3 (55m.toe).

TABLE 1

Share of Natural Gas in Gross Inland
Primary Energy Consumption

milliards(10^9) m^3 / %

	1980		1985		1990	
	Natural Gas $10^9 m^3$	% Share	Natural Gas $10^9 m^3$	% Share	Natural Gas $10^9 m^3$	% Share
D	58.1	17 %	65.0	17 %	67.6	16 %
F	27.3	9 %	35.2	12 %	46.7	15 %
It.	30.2	17 %	37.6	18 %	48.1	21 %
N	39.6	47 %	43.7	43 %	43.9	39 %
B	11.6	19 %	12.0	18 %	12.5	17 %
L	0.6	11 %	0.7	12 %	0.9	13 %
UK	51.0	20 %	61.2	21 %	66.3	21 %
Ir	1.0	9 %	1.4	9 %	1.4	8 %
DK	-	-	1.6	6 %	3.9	12 %
H	-	-	0.1	-	0.1	-
E 10	219.0	18 %	259.0	18 %	292.0	19 %

Consumption

9. The pattern of use of natural gas varies considerably between Member States. Table 2 shows that for the major continental Member States at least a third of gas consumption is accounted for by industry, except in the Netherlands, which like the UK, supplies a much larger proportion to the domestic sector. The other noticeable factor to emerge from Table 2 is the continued high use of natural gas for electricity generation by some Member States, notably in Germany.
10. Because of the relatively limited supplies of natural gas the use of gas for electricity generation is discouraged by the Council Directive adopted in February 1975⁽¹⁾. This required the approval of the appropriate national authorities of the Member State for "The conclusion of new contracts for the supply of natural gas to power stations, the extension of contracts upon expiry and the construction of new power stations using natural gas.....". Such authorisation may only be granted in response to technical or environmental demands or, for interruptible contracts only, where the gas cannot be put to a more profitable use.
11. Table 3, which gives forecasts for the use of gas for electricity generation, shows an increase from 32,6 to 38,1 milliards m³ for the Community by 1985, followed by a fall to almost the 1980 level by 1990. The increase concerns most of the member states except Belgium and Germany with a very small decrease from a very high absolute level. This Community forecast does not seem satisfactory from the standpoint of the Council Directive mentioned above and can only partly be explained by existing long-term contracts and special environmental conditions.
12. The use of interruptible contracts for gas which continues to be used for electricity generation offers a certain margin for reducing demand in the event of an interruption in supplies - a subject that will be treated further under the section on security of supplies. Indeed all interruptible contracts give such a measure of flexibility and should be encouraged where possible.

(1) Official Journal of the European Communities No. L 178/24

Imports

13. The most significant development in natural gas is the rapid growth in imports. Figure 1 shows that as indigenous production has levelled off so consumption has increasingly been met by imports. As recently as 1977 only 11% of Community consumption was met by imports from third countries. The following year this figure rose to 19% and in 1980 reached 26%. By 1985 the latest forecasts (February 1981) indicate 35% of gas will be imported from outside the Community and 46% by 1990.

TABLE 2

Natural Gas Consumption 1980 (Provisional)

	EUR		D		F		It		N		B		L		UK		Ir	
	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%	$10^9 m^3$	%
Industry	78.1	36%	22.7	39%	12.0	44%	16.2	54%	10.8	27%	4.9	42%	0.3	50%	19.4	38%	0.5	48%
Power Stations	32.6	15%	17.5	30%	1.7	6%	2.7	9%	7.5	19%	2.1	18%	0.1	17%	0.6	1%	0.5	52%
Domestic and commercial	100.2	46%	17.9	31%	13.6	50%	11.3	37%	21.3	54%	4.6	40%	0.1	17%	31.0	61%	-	-
Total	219.0		58.1		27.3		30.2		39.6		11.6		0.6		51.0		1.0	

TABLE 3

Share of Total Gross Natural Gas Consumption used for Electricity Generation

 $10^9 \text{ m}^3 / \%$

	1980		1985		1990	
	Generation 10^9 m^3	% of total cons.	Generation 10^9 m^3	% of total cons.	Generation 10^9 m^3	% of total cons.
D	17.5	30%	16.9	26%	14.3	21%
F	1.7	6%	2.5	7%	2.5	5%
It	2.7	9%	4.2	11%	6.0	12%
N	7.5	19%	8.3	19%	6.8	15%
B	2.1	18%	2.0	16%	1.8	15%
L	0.1	16%	0.3	36%	0.3	29%
UK	0.6	1%	0.7	1%	0.7	1%
Ir	0.5	52%	0.8	55%	0.8	55%
DK	-	-	-	-	-	-
H	-	-	-	-	-	-
E 10	32.6	15%	38.1	15%	33.0	11%

14. The reliance on gas imported from third countries is even more marked for the major consuming Member States which are not fortunate enough to have considerable reserves of their own:

Table 4

Imports from "third countries" as a percentage of total consumption

	1980	1985	1990
Federal Republic of Germany.	34%	36%	39% (48%)*
France	38%	54%	83%
Italy	28%	60%	68%
Belgium	21%	50%	56%

15. The main third countries supplying natural gas to the Community are Norway, the USSR and Algeria. In 1980 they accounted for 52%, 40% and 6% of imports respectively, with Libya accounting for the remainder. Algerian supplies would have been higher if it had not been for the interruption in LNG deliveries to France. With a third new contract, deliveries of LNG were forecast to rise appreciably in 1980 but in fact they fell by about 20% over the previous year.

* Assuming imports of 12 milliards m³ from USSR under new contract.

Difficulties affecting the supply of natural gas

16. In 1980 the member states estimated that imports of natural gas would reach 110 milliards m^3 in 1985 and 152-157 milliards m^3 in 1990. At the beginning of 1981 these forecasts were reduced to 91 milliards m^3 in 1985 and 135 milliards m^3 in 1990. Difficulties which are likely to arise in negotiating new contracts, however, put in question the possibility of achieving even these revised figures.
17. The first problems over natural gas imports began to arise following the Iranian revolution in 1979. Previously a contract had been agreed for a swap arrangement involving Iranian gas deliveries to the USSR in exchange for the delivery of about 9 milliards m^3 /year of Soviet gas to the Federal Republic and France. Deliveries were forecast to begin this year (1981) but although the contract has not been formally rescinded, it is clear that no progress is likely in the present circumstances.
18. The subsequent rise in oil prices prompted Algeria to demand price parity with crude oil (f.o.b.) for its natural gas exports. Both the US and France experienced an interruption in supplies after opposing these demands, although deliveries have now recommenced.
19. During the same period contracts for 19.5 milliards m^3 /year previously agreed between the Algerian exporting undertaking, Sonatrach, and a consortium of German importers and Gasunie of the Netherlands, have, for all practical purposes, been abandoned because of Algerian unwillingness to build the required liquefaction plant. To carry out the contract would therefore have meant delivery of the gas by pipeline, constructed mainly at the importers expense.
20. More recently Italy, which has a pipeline to bring 12 milliards m^3 of gas from Algeria nearing completion, has been faced by demands for price parity with crude oil as well as similar demands from Libya, which supplies Italy with relatively small quantities of LNG.
21. There has also been some uncertainty over the contracts being negotiated between several European undertakings and the USSR, which total over 40 milliards m^3 /year. In addition there have been very tough negotiations over the price of the gas as well as over related credit terms and the cost of materials which are to be provided by the importing countries for this vast project.

22. The quantities of gas involved are listed below together with the contracted quantities under existing contracts :

Table 5 - Natural Gas Import
contracts with the USSR

	Possible New contracts	Existing contracts
		milliards m ³ /yr
Federal Republic of Germany	12	10.7
France	8-10	4
Italy	10	7
Netherlands	5	-
Belgium	5	-
	40-42	21.7
Austria	3	2.5
Switzerland	1	-

23. With the new contract, imports of natural gas from the USSR will account for a maximum of about 22% of natural gas consumption and about 4% of total primary energy consumption. As can be seen from Table 6, the figures are higher for some Member States.

Table 6

Share of Total Natural Gas Supply by Country of Origin 1990

	%			
	Algeria	Norway	U.S.S.R.	
D	21% (1)	14%	16%	34% (4)
F	20%	6%	9%	26%
It	26%	-	15%	35%
N	13% (1)	7%	-	11%
B	38%	22%	-	38%
UK	2% (2)	14%	-	-
E.10.	9%	10%	7%	21%
	+7%	+5% (3)		

(1) Project uncertain

(2) subject to renegotiation

(3) assuming new contract for $15 \cdot 10^9 \text{ m}^3$ /year operative by 1990

(4) with new contract currently under negotiation.

24. This brief resumé of the problems which have arisen over gas imports shows the difficulties which face the Community gas industry in the coming years. The growing dependence on a small number of suppliers outside the Community increases the vulnerability to possible supply interruptions and unreasonable price demands.

It is therefore necessary to systematically consider the questions of security and the price of natural gas supplies.

SECURITY OF SUPPLIES

25. To attain the necessary reinforcement of the security of natural gas supplies to the Community it is necessary to consider the following measures :

(i) measures to reduce the importance of a given external source of supply:

- encourage indigenous production
- diversification of imports
- development of SNG (Synthetic Natural Gas).

(ii) measures to mitigate the short term effects of an interruption :

- interruptible contracts
- storage (gas or substitutes)
- interconnection of transport networks
- spare production capacity

Indigenous Production

26. The prospects for increasing indigenous production, at least in the short term, are rather limited. Table 7 shows that, given the estimates of proven reserves, there is little scope for significantly increasing production from the currently planned production levels. Perhaps the most scope lies in increasing the figures for proven reserves by a more intensified exploration effort and by developing technology to enable the gas from "marginal" fields, such as those in the North Sea, to be recovered.

TABLE 7

Community Natural Gas Reserves, Production and R/P Ratios10⁹ m³

	Estimated Proven Reserves(1)	Gross Production			R/P 1980 ratio (years)
	1.1.81	1980	1985	1990	
D	170	18.7	19.5	19.5	9
F	170	8.2	5.9	3.4	21
It	170 ⁽²⁾	13.4	8.7	8.7	13
N	1756	86.7	81.4	68.5	20
B	-	-	-	-	-
L	-	-	-	-	-
UK	702	39.3	48.5	50.4	18
Ir	27	1.0	1.4	1.4	27
Dk	113	-	1.6	3.9	29 ⁽³⁾
H	113	-	0.1	0.1	1130
E 10	3221	167	167	156	19

(1) Oil and Gas Journal 29.12.80

(2) Cedigaz report

(3) Using 1990 production rate

Diversification of Imports

27. The security of natural gas supplies to the Community could be increased by a wider diversity of supplying countries. Table 8, however, which lists the countries of the world with significant natural gas reserves, shows that because of distance or other considerations, the number of potential suppliers is limited. Nevertheless, several Community undertakings are holding preliminary talks or negotiations with several countries including Bahrein, Cameroun, Canada and Qatar. A contract for 7.5 milliards m³/yr had also been agreed between Nigeria and a consortium of undertakings from Belgium, the Federal Republic, France, Italy and the Netherlands. Deliveries were to begin in 1984/5 but it looked as though this date may be delayed because of doubts over whether the Nigerian 5 year plan could support the required financial contribution. More recent reports, however, suggest the problem has been overcome.
28. Nigeria is an interesting case in that it represents the recovery of gas which is associated with oil production and would otherwise be flared. Indeed Table 8 shows the enormous quantities of gas which are lost in this way.
29. Canada is of particular interest as a possible supplier to Europe with its significant reserves and promising potential for further discoveries. The "Arctic" resources would have to be recovered by LNG tanker and would then be about as close to European as to American markets. Considerable activity is being undertaken to overcome the formidable technical problems presented by the very hostile conditions, although it remains for the Canadian Government to give a clear indication of natural gas export policy.
30. Further imports from Norway also represent a very desirable source of supplies and the announcement of a Norwegian Gas Gathering Pipeline to link into the existing pipeline from Ekofisk to Emden in north Germany is a very welcome development. This pipeline will bring gas from the Statfjord, 34/10 and Heimdal fields as shown in Figure 3. Indeed the Norwegian North Sea offers considerable potential with the exciting recent discoveries, including the

TABLE 8

Countries with substantial Natural Gas
Reserves within trading distance of the Community

10⁹ m³

Estimated Proven Reserves 1.1.81	1980				
	Gross Production	R/P Ratio (Years)	Reinjected Gas	Flared Gas	
USSR	26050	135.0	193	-	13.0
Iran	13730	20.1	683	2.3	9.5
USA	5410	568.9	10	20.1	2.6
Algeria	3720	36.2	103	9.8	15.6
Saudi Arabia	2830	54.3	52	0.3	39.1
Canada	2470	96.8	26	11.0	2.0
Mexico	1830	36.7	50	-	6.1
Qatar	1700	6.4	266	-	1.2
Norway	1210	27.5	44	1.8	0.6
Venezuela	1190	32.2	37	14.9	2.3
Nigeria	1160	26.8	43	-	25.7
Kuwait	870	9.6	91	0.6	2.3
Iraq	780	11.4	68	-	9.6
Libya	670	20.4	33	10.7	4.6
Abu Dhabi	570	12.6	-	-	6.8
Trinidad and Tobago	340	5.3	64	-	2.3
Bahrain	250	4.8	52	1.2	0.8
TOTAL WORLD	74720	1780	42	86	177

huge 31/2 field estimated to have reserves of at least 560 milliards m³ and possibly much more. However, the development of these fields will depend on Norwegian oil and gas development policy, the technical difficulties and for some fields the choice of priorities between oil or gas development.

Synthetic Natural Gas

31. In the longer term Synthetic Natural Gas (SNG) produced from coal could begin to play an increasingly important role in Community gas supplies. The obvious advantage of SNG is the abundant availability of coal particularly in the UK and the Federal Republic, although present technology has not yet made SNG competitive with natural gas, even at current prices. Nevertheless SNG represents an insurance policy as well as holding the possibility of becoming competitive through further technical development. The Commission is also active in this sphere through its financial support of coal gasification demonstration projects, including two underground "in situ" projects. However the problems should not be underestimated and SNG is unlikely to make a significant impact in the medium term.

Interruptible Contracts

32. An interruptible contract is a contract made between the gas undertaking and certain consumers (usually large industry) allowing supplies to be reduced or interrupted so as to deal with increased demand by other customers (e.g. the seasonal demand of domestic customers) or a shortfall in bulk gas supplies to the undertaking.
33. Of course, for such contracts, adequate stocks of, or ready access to, substitute fuels must be assured as must the ability to use the alternative fuel. Gas burning power stations, because of their ease of control and opportunities for dual fuel use, offer a significant measure of flexibility for some Member States. Such measures should not be confused with the longer term objective of encouraging the move away from oil or gas for electricity generation, but should be seen as a short term expedient for coping with shortages of natural gas partly based on the fact that oil is cheaper and more convenient to store.
34. The figures below summarise the percentage of total sales on interruptible contracts.

Interruptible Contracts (Estimated 1979)

	% of total sales	Quantity milliards m ³ /yr
Belgium	27%	3.3
Federal Republic of Germany	11%	6.3
France	15%	4.1
Italy	16%	6.5
Netherlands	7%	2.9
United Kingdom	18%	9.5

Storage

35. Although gas storage is expensive, and it may sometimes be better to store substitute fuels (LPG, oil), some Member States have significant gas storage :

Underground Storage milliards m³ (Recoverable Gas)

	<u>Existing</u>	<u>Under Construction</u>
Belgium	-	0.2
Federal Republic of Germany	1.8	1.1
France	3.7	n/a
Italy	2.1	1.2
United Kingdom	-	0.2

36. There is also a certain amount of storage in LNG form, particularly at LNG terminals, although this is relatively small and more for "operational" requirements.
37. "Strategic" gas storage requires suitable geological strata such as salt domes, aquifers or disused gasfields, which occur to varying extents in the Member States. Because of this, and because demand centres for gas cannot be expected to correspond to the distribution of naturally occurring geological strata, some measure of cooperation on storage at a Community level is likely to be more efficient.

38. The maximum rate of extraction and refilling times are also important considerations for gas storage and should be viewed in conjunction with spare production capacity as treated in the next section. After all the effective designation of an existing field as storage by always keeping some gas and production capacity in reserve is equivalent to, and cheaper than, preparing a new storage structure and filling it with gas.

Spare Production Capacity

39. As can be seen from Table 7 production is to decline over the next ten years for several Member States, particularly the Netherlands. Indeed there has already been some decline and, where this reflects a deliberate choice to preserve natural gas resources rather than their exhaustion, the maintenance of spare production capacity could be used to meet shortfalls in supplies. Of course this will incur a cost, as any insurance policy will, and it would be obviously foolish to have expensive developments (e.g. offshore) not working at maximum utilisation. Nevertheless cooperation in this area, which is related to the question of strategic storage of gas, would greatly increase the security of supplies. It should also be remembered that some spare capacity and/or storage must be built in to deal with seasonal variations in gas demand thus overlapping with, and sharing the cost of, purely "strategic" measures.

Interconnection

40. Further possible interconnection of the gas transport network is not a measure which increases the overall resources available, but merely allows all the other possible measures to be used more widely and sometimes more economically. It is clear that if one Member State has an interruption in supplies it will be able to manage much better if it has wider access to Community resources.

41. The need for interconnection, which as Figure 2 illustrates is already well developed, is made even more necessary by the uneven distribution of natural gas resources within the Community. These, together with Norwegian resources, are concentrated to the north of the Community and perhaps special attention must be given to enhancing the security of the Member States to the south.

42. Interconnection by itself is not sufficient either. It is necessary to have the political will to cooperate in the event of difficulties in supplies. It is also necessary to study the possible difficulties that might arise, how they could be overcome and what system improvements would be required to help deal with them.

IMPORT PRICES

43. The rapid growth of natural gas in meeting Community energy needs was based on reliable supplies at competitive prices. This rapid growth has been checked partly by the general price rise of energy and economic recession and partly by the erosion of competitiveness and the uncertainty of supplies now surrounding gas.

Competitivity of Natural Gas

44. If natural gas is to maintain or expand its current role it must remain competitive on the final consumers' market. The fuels which compete with gas depend on the exact market; broadly speaking on the industrial market the main competitor is heavy fuel oil and to an increasing extent coal, whilst on the domestic market the competitors are gasoil and to some extent electricity. However whilst the market gasoil price is higher than the current heavy fuel oil price, natural gas could not just confine itself to this market, since industrial sales are essential to provide the steady demand necessary for the economic utilisation of the distribution system.

Transportation Costs

45. Furthermore, in addition to the distribution costs, it is also necessary to take into account the transportation costs for natural gas imported from third countries. These are considerably higher than for oil over the same distance because of the extra costs associated with liquefaction plant, LNG tankers, regasification plant and LNG storage or with natural gas transportation pipelines. Because of these higher costs of bringing gas to the market and because of the need for gas to remain competitive it is clear that anything approaching FOB crude parity would lead to a decline in the gas market and would render long range importation contracts uneconomic.

Indexation

46. It is also important that indexation clauses should not be allowed to erode the differential in FOB prices necessary to keep gas competitive on the final consumers market. In particular the possibility of transport and distribution costs increasing more than for oil should be taken into account in any indexation agreement.
47. Similarly too rigid a link between the price of natural gas and the price of oil would inhibit natural gas playing its full competitive role on the market and it would not be developed to such an extent, to the loss of both producer and consumer.
48. The Community importers of natural gas can only convince the exporting countries of the validity of the argument on prices presented above if they, for their part, adopt a position of solidarity on gas supplies.

Failing sufficient solidarity between the gas undertakings of the Community there is a risk of overbidding for gas, which would reduce the place of gas in Community energy supplies to the detriment of both the exporting countries and the importing countries of the Community.

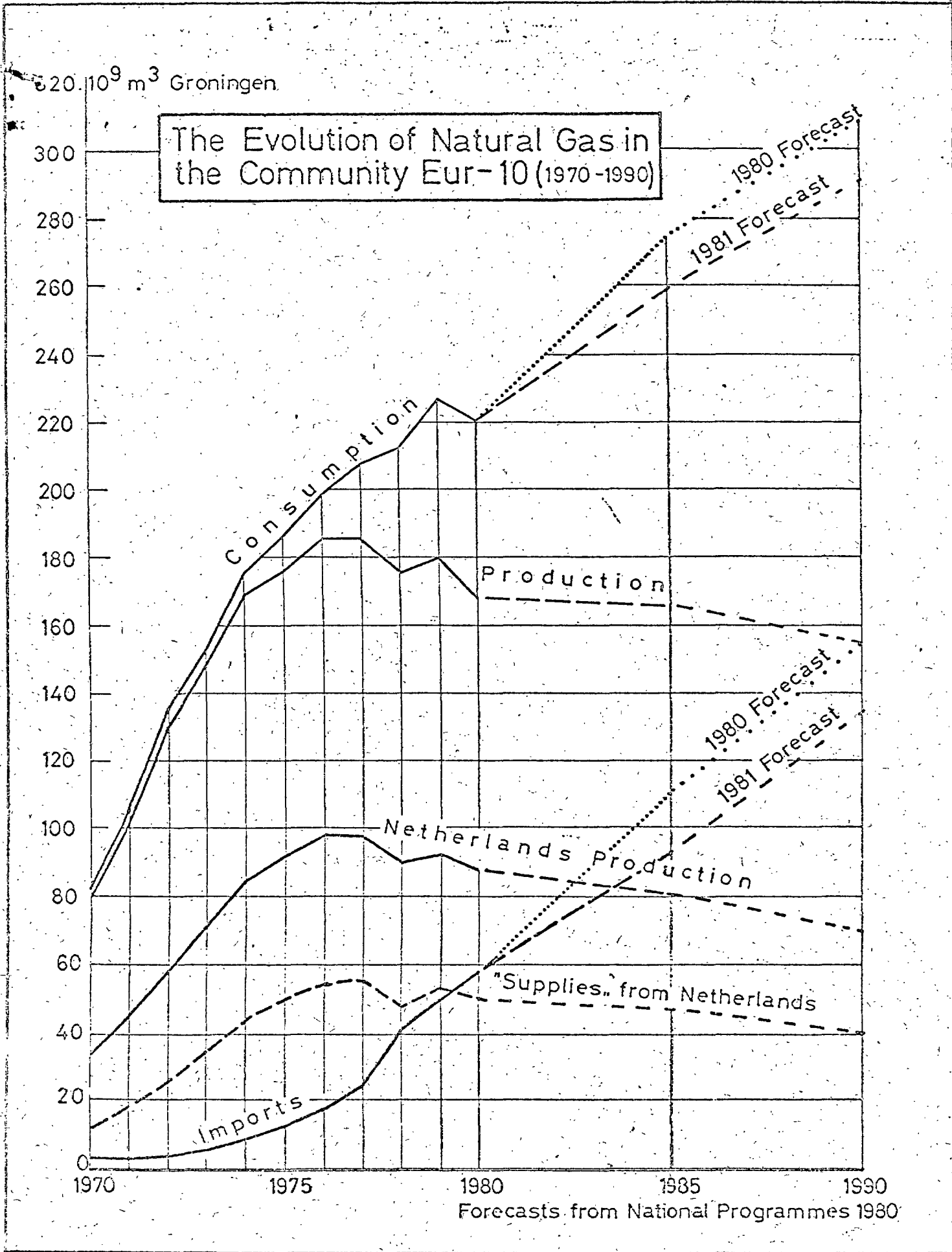
To avoid this danger, the Commission believes that it is necessary to establish, at Community level, a procedure for the exchange of views and information on negotiations for gas supplies from third countries.

CONCLUSIONS

49. On the basis of the Commission's analysis the Council is invited to approve :
- the principle of increasing the security of natural gas supplies to the Community by encouraging both measures to reduce the importance of any given source of supply and measures to mitigate the effects of a possible interruption in supplies
 - the principle of establishing an appropriate procedure for the exchange of views and information on negotiations for the purchase of natural gas from third countries.
50. The Commission, after consultation with Member States and the gas industry, will make propositions within the next six months on reinforcing the security of natural gas supplies to the Community and in particular :
- (i) measures to reduce the importance of a given external source of supply :
 - encourage indigenous production
 - diversification of imports
 - development of SNG (Synthetic Natural Gas)
 - (ii) measures to mitigate the short term effects of an interruption :
 - interruptible contracts
 - storage (gas or substitutes)
 - interconnection of transport networks,
 - spare production capacity

A N N E X E S

FIGURE 1



PRINCIPAL NATURAL GAS PIPELINES AND LNG TERMINALS

Figure 2

