

COMMISSION OF THE EUROPEAN COMMUNITIES

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REPORT ON THE ACHIEVEMENT OF THE COMMUNITY
ENERGY POLICY OBJECTIVES FOR 1985

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Report on the achievement of the Community
energy policy objectives for 1985

Introduction

1. In conformity with the Councils' resolution of 17 December 1974 (1), the Commission has compared the Member States' most recent energy forecasts for 1985 (annex 1) with the Community objectives adopted by the Council on that date (annex 2).
2. This factual examination gave the Commission the opportunity to ask a number of important questions. The Commission thought that an objective discussion of those questions could lead to a clearer explanation and understanding of the problems encountered and that it could enable concrete solutions to be found, in a spirit of Community solidarity and with a balance between the efforts made by the various Member States, for the implementation of an ambitious but realistic Community energy policy.

- the first of its kind -
3. This is the purpose of this report, which should enable the Council to hold comprehensive discussions on the basis of which the Commission could then draw up proposals.
4. The essential but difficult problem of the amount of investments and its financing has already been the subject of a previous Commission document⁽²⁾ and the matter is being studied further with the cooperation of specialists from the Member States.

(1) OJ n° C 153 of 9 July 1975

(2) Doc.COM (75) 245 final

I. Energy Demand

A. Reduction of energy consumption growth rate

This is an essential long term objective which must be striven for ceaselessly, namely without being influenced by the inevitable changes in situation. This objective will, in effect, help to reduce Community dependence on the exterior, in line with the generally expressed concern for a better management of the world's resources.

Influenced by the 1973 energy crisis, all member states have adopted a number of measures in the above category aimed towards the rational use of energy. These measures are very diverse in both type and importance.

With the objective of integrating their efforts in this area, member states have considered it necessary to undertake a systematic and careful analysis of the principle sectors of consumption to determine the most appropriate actions and have, together, fixed an objective (Council resolution dated December 17th 1974) to reduce consumption in 1985 by 15% compared to initial estimates and to periodically check the progress in this area at both national and Community level.

The first report, now submitted to governments (doc. XVII/258/3/75)

- suggests the adoption of a series of recommendations relative to those items studied on which there has been general agreement, and indicates the lines for future work and the measures which, as a consequence, should be adopted;
- underlines the need to set up a mechanism for the effective watching and checking of the application, by country and by sector, of those measures judged necessary on the basis of parameters which, at the start and during their evolution, reflect the differing socio-economic structures of the member states.

B. Share of electricity in the total demand for energy

In its Resolution of 17 December 1974 the Council adopted the objective of "relying more and more on electricity as nuclear energy in particular is developed". The Commission felt then, and the Council had pointed it out again, that "in this way electricity would cover 35 % of energy consumption by 1985".

According to the forecasts drawn up by the Member States in June 1975, electricity (42 % produced by nuclear energy) would represent 32 % of the Community's energy consumption in 1985.

The Commission is aware of the fact that the 35 % target which it had proposed for the share of electricity in the Community's energy consumption in 1985 seems ambitious (1). The Commission would point out, however that according to the current forecasts, certain Member States will actually, or almost, achieve this percentage.

The Commission considers that a discussion within the Council would be useful at the economic and practical level, on the possibility of certain Member States increasing the share of electricity in their total energy consumption in 1985.

(1) The objective set by the Commission assumed faster growth of the gross domestic product, and above all an installed nuclear capacity of 200 GWe by 1985, figures which exceed considerably the current national forecasts.

II. The Community's energy supplies

Together with the rational utilization of energy, optimum development of the Community's energy resources is the most reliable way of reducing the Community's dependence on imported energy, and in respect of oil imports in particular.

This implies the need to find out whether it will be possible to achieve or even exceed the figures currently forecast by the Member States.

A. Solid fuels

The main problem is that of the maintenance of the level of Community coal production (i.e., 180 million toe in 1985, which was the target figure adopted by the Council in December 1974) and the stabilization of sales thereof. The two countries primarily concerned are the United Kingdom and Germany.

According to current forecasts, Community coal production will total some 160 million toe in 1985, which is 20 million toe below the target.

The Commission therefore wonders whether the reductions announced in the national forecasts (especially the figure of approximately 15 million toe forecast for Germany) could not be revised and, if this is the case, on what terms and subject to the implementation of what measures (national or Community). Similarly, the Commission wonders whether it might not be possible in addition, or as an alternative, to increase U.K. coal production, no doubt principally for export to other Member States.

The Commission considers that a discussion on this problem might enable the Community to assess more accurately the advantages or disadvantages and possible risks involved in production by the Community of solid fuels, and to decide what national and/or Community measures should be adopted to achieve the figures currently forecast or approach the target figures adopted by the Council in December 1974.

The Commission is concerned mainly with the current trend, and thinks, in particular, that suitable measures are without a doubt necessary to ensure the stabilization of coal sales, especially to power stations.

B. Oil

In December 1974 the Council set a target figure of 180 million toe for Community oil production in 1985.

The current forecasts produced by the Member States vary between 110 and 160 million toe. Those figures include a conservative estimate of 11 million toe representing the summation of the forecasts produced by Denmark, France, Ireland, Italy, the Netherlands and Germany: this presupposes the fact that the prospecting programmes embarked on by those countries, which are far from negligible, will not produce any results in the next few years.

115
180
- 11
169

The United Kingdom, however, will play a predominant role in this sector. It would therefore be valuable for the Community to know:

- (1) under what conditions and as a result of the implementation of what measures (Community measures in particular) the figure of 150 million tons in 1985 stands the best chance of being attained?
- (2) whether the implementation of suitable Community measures (what type?) would enable the United Kingdom to set itself the ambitious production target of 175 million toe (upper level in the Brown Book) or even higher for 1985, with the resultant benefits as regards reducing the Community's dependence on imported energy?

C. Natural gas

In December 1974 the Council adopted a target figure of 175-225 million toe for production in 1985.

The current forecasts produced by the Member States vary between 150 and 160 million toe for 1985¹.

In this sector two Member States, the United Kingdom and the Netherlands, must be considered quite separately from the others. The Commission therefore wonders whether those two countries could not increase their existing contribution towards reducing the Community's dependence on imported energy, and in particular:

- in the case of the United Kingdom:

(1) whether the figure of 35-50 million toe forecast for 1985 is in line with the production prospects²?

160
75-50
-
125 - 110

(2) whether the implementation of certain measures, in particular Community measures (what type?) would enable the United Kingdom's natural gas production to be increased to beyond the expected 35-50 million toe by 1985?

(3) whether there are any possibilities, beyond present estimates of production to meet internal demand, of the United Kingdom exporting natural gas to other Member States who may be interested.

- in the case of the Netherlands:

- (1) whether the figure of 67 million toe forecast for 1985³
- results from the gradual exhaustion of the Slochteren deposit
 - includes production from other deposits which are currently being worked
 - takes into account the possibility that new deposits might be discovered?

110-225
67
43-258

¹Taking into account the correction for the United Kingdom (35-50 million toe instead of 58) and for Ireland (1.1 million toe instead of 0.16)

²In 1976 net production should reach 33 million toe according to the forecasts submitted by the United Kingdom authorities to the DG for Energy within the framework of the annual economic survey.

³In 1976 net production should reach 80 million toe according to the forecasts submitted by the Netherlands authorities to the DG for Energy within the framework of the annual economic survey.

- (2) whether, in view of the existing reserves and the continued prospecting programmes, the Netherlands could not consider (and if so, on what terms) achieving production figures by 1985 which would be higher than the current forecasts and which would benefit the Community as a whole ?

- (3) whether the strategic reserves, which represent 5% of annual energy consumption, should be deducted from the production forecasts or not?

- (4) whether the net export figures forecast by the Netherlands (38.1 million toe) take into account contracts for the import of natural gas which have already been concluded or are being negotiated?

On a more general level, the Commission also wonders whether an effort should not be made to align the price of natural gas more closely on that of the rival forms of energy. This would both guarantee a more rational utilization of this fuel and promote prospecting and extraction programmes in the Community, and, finally, would improve the possibilities for financing undertakings in the gas section.

D. Structure of electricity production

The target figures adopted by the Council in 1974/75 were based on the following three guidelines:

- limitation of the use of fuel oil and natural gas in power stations (see Council Directives Nos 75/404 and 75/405);
- optimum utilization of coal in the power stations;
- essential role of nuclear energy in very large power stations. The objective was to have, by 1985, "stations with an installed capacity of at least 160 GWe and, if possible, of 200 GWe", i.e., nuclear energy would represent 13-16% of total primary energy requirements.

These qualitative guidelines are still entirely valid even if the amendments to the forecasts of electricity demand for 1985 are such that the quantitative objectives (e.g., 160-200 GWe) may or should be re-examined.

The Commission feels that, in the light of the forecasts submitted by the Member States, these guidelines have been respected on the whole. A favourable trend has been noted in Community electricity production based on the sources detailed below:

(1) Coal

The forecasts take into account a considerable increase in coal-fired electricity generation: approximately 308 TWh in 1975, and approximately 415 TWh in 1985.

The Commission is pleased with these forecasts, but is anxious to point out that a substantial effort will be necessary without a doubt if the figures are to be achieved or approached. This implies in particular that coal-fired electricity generation must not simply represent a "buffer", i.e., that the necessary investments must be made in coal-fired power stations and that the load curve for those power stations should not be too low. *T v h*

(2) Natural gas

Electricity generation on this basis is certain to rise from approximately 143 TWh in 1975 to 150 TWh in 1985, but a considerable reduction will be noted as from 1980 (approximately 170 TWh).

This is a satisfactory trend: it corresponds to the correct application of the Community Directive on limiting the use of natural gas in power stations. It would not be sensible either to prevent the construction of gas-fired power stations in certain cases provided for in Directive No 75/405, or to hope for the abandonment of plans for gas-fired power stations commissioned before the Directive mentioned above was brought into force and which must be put into service in order to compensate for any shortfall in the electricity balance around 1980.

(3) Petroleum products

Generation of electricity on the basis of petroleum products is expected to rise from 305-308 TWh in 1975 to 335-365 TWh in 1985, but the important factor to be noted is the considerable reduction in generation as from 1980 (389-429 TWh).

A country-by-country examination of electricity generation on the basis of petroleum products does, however, give rise to several questions.

✓ Fuel-oil-fired power stations are presently in order in most Community countries, and the orders are particularly large in Italy, the United Kingdom and Germany. It hardly seems realistic to hope that these programmes will be abandoned: they will probably be necessary to compensate for shortfalls in the electricity balances of the countries concerned around 1980.

However, steps must be taken to ensure that an excessive supply of heavy fuel-oil, sold at relatively low prices, does not encourage electricity producers to make greater use of that fuel. Consequently, and, on a more general level, to ensure that the best possible use is made of petroleum products, a programme for the construction of conversion units (especially hydrocracking) must be implemented in the Community to enable the supply of petroleum products to be adapted to the trend of the demand structure which is already tending towards an increase in the consumption of light products.

One particular problem which still remains to be solved concerns Denmark and the Netherlands, where the electricity generation forecasts seem to imply the placing of new orders for fuel-oil-fired power stations which could also be dual-fired: this problem is in fact bound up with the production of nuclear-based electricity, or to a lesser extent with the generation of electricity on the basis of solid fuels.

(4) Nuclear

According to forecasts produced by the Member States, the generation of nuclear-based electricity, in the Community as a whole, could total some 850 TWh by 1985 (approximately 83 TWh in 1975).

This would represent an installed nuclear capacity of 150 to 160 GWe, compared to the objective of 160 and if possible 200 GWe, fixed by the Council, but the progress thus realised would however be spectacular. Electricity of nuclear origin would then represent about 42% of the forecast production of electricity and 13% of the total energy consumption envisaged for 1985, in respect of the hypothesis of energy dependence of 50% adopted by the Council in December 1974.

Nevertheless there are problems, some of which are of a growing nature, to be resolved in order to realise these forecasts. An important effort is necessary with respect to financing (and it should be noted that construction costs are rising rapidly) as well as in the field of increasing the capacity of the nuclear construction industry and the availability of trained personnel. Perhaps even greater efforts will have to be made to supply the plants with a satisfactory flow of fuels, especially natural uranium, in respect of which a shortage could arise in the period up to 1985. Considerable efforts will therefore be necessary to reduce the risks attached to the production and utilisation of nuclear energy, as well as to obtain public support for a rapid growth in the number of nuclear sites, and to maintain the confidence of public opinion in nuclear power.

The share of nuclear electricity in total electricity production could reach nearly 60% in Belgium and more than 70% in France and in Luxembourg, and between 40 and 45% in Germany and Italy, whilst it would be below 25% in the United Kingdom, Denmark and the Netherlands.

In these three Member States, as indeed for the other Community countries, it does not seem that any acceleration of the nuclear programme would have any marked effects until after 1985 on the achievement of the objective.

It is nonetheless still essential - and this applies throughout the Community - that any higher figure forecast for electricity generation, either on the basis of the assumption of a faster rate of growth of the gross internal product and of the demand for energy, or because of a desire to promote the increased penetration of electricity on the market (see I.B. page 3), should result chiefly in the placing of suitable orders for nuclear power stations or for solid-fuel-fired power stations if the nuclear programmes cannot be implemented in good time.

A particular case remains, posed by the Netherlands and Denmark, where even with the present forecasts of consumption of electricity, an acceleration of nuclear programmes could lead to less dependence on oil products for the production of electricity up to 1985. For these two countries the problem consists in a decision by the national authorities of the place which nuclear power ought to fill taking into account the concern shown by public opinion with regard to the safety of nuclear installations and the protection of the environment.

The Commission would like to see the Council discuss the degree of confidence which the Member States attach to the achievement of their forecasts, as well as the difficulties and constraints which they foresee.

III. General position of the Commission

I. The Commission notes that the Member States' current forecasts covering the make-up of their energy consumption for 1985 coincide to a large extent with the objective announced in December 1974, of (reducing the Community's dependence on imported energy to 50%.) In this sense, the forecasts can be considered encouraging. Yet uncertain and disquieting factors remain:

- At all events, the current forecasts of Community production in 1985 (solid fuel, hydrocarbons and nuclear energy) are lower than the objectives adopted by the Council.
- The Member States' current forecasts from 1985 coincide with a 50% dependence in imports but only in the hypotheses that efforts directed to the rational use of energy will be effective and that a more maintained rate of economic growth than forecast will not create a strongest growth in energy demand.
- These forecasts do not appear to allow of attaining a 40% dependence on imported energy by 1985.

2. The discussions to be held by the relevant bodies will enable conclusions to be drawn in the coming months as to whether or not (and if so, how) to modify the objectives adopted by the Council on 17 December 1974.
3. While not underestimating the need to ensure that the energy forecasts are sufficiently flexible to be capable of being adapted to the economic trend, nevertheless the Commission wonders whether it might not be advisable to pick out those forecasts which would be more voluntaristic in nature as being political objectives. This would facilitate the formulation of more definite policies at national and, in some cases, Community level, which would serve as important guidelines for energy producers and consumers in the Community.
4. The Commission feels that the mere achievement of the figures currently forecast by the Member States could result in major problems, particularly as regards financing and this includes the question of adequate returns on the investments.
5. The Commission considers that it would be advisable if most of these difficulties could be solved by the undertakings and Member States concerned. This presupposes in particular that the prices imposed in the Community are by no means discriminatory but that they reflect as accurately as possible the current and development costs of the energy consumed.
6. Nevertheless, the Commission feels that Community action is also required for various reasons:
 - It could in some cases provide an answer to the questions posed in parts I and II of this report by achieving a balance in the measures implemented by the various Member States;
 - It could give a new impetus to the development of Community energy resources; currently development is more limited than had been hoped.

This is particularly important if it is remembered that the forecasts of demand for 1985 are likely to be amended; in the present circumstances, this could be counterbalanced only if the Community's dependence on imported oil were higher than the 50% which the Council "affirmed" in December 1974 would be achieved by 1985.

7. The Commission moreover considers it to be important that - although such a development can only be modest up to 1985 - the contribution of new sources of energy (solar, geothermal, etc.) should be taken into account on the basis of investigation in depth.

Annexe 1
Appendix 1
Anlage 1

Prévision de la demande/offre d'énergie primaire
estimations des Etats membres

Forecast demand/supply for primary energy
Member States' estimates

Voraussichtlicher Bedarf/Versorgung an Primärenergie
Schätzungen der Mitgliedstaaten

Objectifs énergétiques et Programmes d'investissements : BELGIQUE

Bilans provisionnels d'énergie

en Mio tep	OSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
<u>I. Offre d'énergie:</u>	5,7	43,3	+ 0,6	..	..	9	45	16	54
soit: Combust. solides	5,6	5,3	+ 0,8	11,5		5	6	5	6
Pétrole (3)	-	30,9	- 0,2	27,4 (z)		-	26 (z)	-	28 (z)
Gaz naturel	0,04	7,3	-	8,0		-	13	-	20
Energie nucléaire	0	-	-	-		4	-	11	-
Electr. hydr. & géoth.	0,06	- 0,2	-	..		-	-	-	-
Autres	0,03	-	-	..		-	-	-	-
<u>II. Demande totale (3):</u>		49,6		46,9 (z)		54 (z)		70 (z)	
Dépendance nette vis-à-vis de l'importation		87 %		87 %		83 %		77 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975.

(2) Questionnaire envoyé par la Commission aux Etats membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sources et usages non énergétiques compris.

(z) Sources non comprises, elles s'élevaient à 3,1 Mio tep en 1973.

Country:
Pays : BELGIQUE
Land :

Forecast demand / supply for primary energy : member countries estimates (1)
Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks Bestands- veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks Bestands- veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	5,7	43,3	+ 0,6	5,35	43,9	- 1,45	9,0	48,3	16,0	57,5
solid fuels/combust. solides/feste Brennst.	5,6	5,3	+ 0,8	5,2	7,1	+ 0,45	5,0	6,0	5,0	6,0
Oil/pétrole/Mineralöl	-	30,9	- 0,2	-	28,4	- 1,9	-	(29,3)	-	(31,5)
Natural gas/ gaz nat. Erdgas	0,0	7,3	-	0,05	8,5	-	-	13,0	-	20,0
Nuclear / nucléaire Kernbrennstoffe	0,0	-	-	0,03	-	-	4,0	-	11,0	-
others/autres/sonstige	0,1	- 0,2	-	0,1	- 0,1	-	-	-	-	-
<u>Demand-Demande-Bedarf(3)</u>		49,6			47,8			57,3	73,5	
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					89 %			84 %		78 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP					+ 4 %			+ 4,2 %		+ 4,4 %

- (1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE/
die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.
- (2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes /
SAEG: Statistisches Amt der Europäischen Gemeinschaften
- (3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker

Objectifs énergétiques et Programmes d'investissements : DANMARK

Bilans prévisionnels d'énergie

en Mio ton	OSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
<u>I. Offre d'énergie:</u>	0,07	20,63	- 0,42	0,1	21,6	(0,6)	(22,9)	..	..
soit: Combust. solides	-	2,17	+ 0,10	-	2,1	-	2,5	-	3,1
Pétrole (3)	0,07	18,50	- 0,52	0,1	19,5	0,6	20,4	..	23,4
Gaz naturel	-	-	-	-	-	..	..	..	..
Energie nucléaire	-	-	-	-	-	-	-	..	..
Electr. hydr. & géoth.	0,0	- 0,04	-	-	-	-	-	-	-
Autres	-	-	-	-	-	-	-	-	-
<u>II. Demande totale (3):</u>		20,28		21,7		(23,5)		..	
Dépendance nette vis-à-vis de l'importa- tion		99,7 %		99,5 %		(97,4%)		..	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux Etats membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour scoutes et usages non énergétiques compris.

20.10.1975

Country:
 Pays : DANMARK
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
Supply-Offre-Angebot	0,07	20,63	- 0,42	0,09	20,14	- 1,85	0,6	21,8	0,5	25,3
solid fuels/combust. solides/feste Brennst.	-	2,17	+ 0,10	-	2,51	- 0,61	-	2,5	-	3,1
Oil/pétrole/Mineralöl	0,07	18,50	- 0,52	0,09	17,65	- 1,24	0,6	(19,3)	(0,5)	(22,2)
Natural gas/ gaz nat. Erdgas	-	-	-	-	-	-	..	..	..	..
Nuclear / nucléaire Kernbrennstoffe	-	-	-	-	-	-	-	-	..	-
others/autres/sonstige	0,0	- 0,04	-	0,0	- 0,02	-	-	-	-	-
Demand-Demande-Bedarf(3)	20,28			18,38			22,4		25,8	
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit	+100 %			+100 %			97 %		98 %	
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP	- 1,6 %			- 1,6 %			+ 3,5 % à 4 %		+ 3,5 % à + 4 %	

- (1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE / die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.
- (2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften
- (3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker.

Objectifs énergétiques et Programmes d'investissements : DEUTSCHLAND

Bilans prévisionnels d'énergie

en Mio tep	CSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation totale	Production intérieure	Importation totale	Production intérieure	Importation totale
I. Offre d'énergie:	120,7	149,4	- 0,5	120,0	178,2	147	223	173	249
soit: Combust. solides	92,0	- 10,3	+ 1,5	91,9	7,5	91	9	88	9
Pétrole (3)	6,7	145,1	- 2,0	6,7	154,6	6	157	5	184
Gas naturel	15,3	12,2	-	15,4	11,8	18	43	19	52
Energie nucléaire	2,7	-	-	2,8	-	28	-	57	-
Electr. hydr. & géoth.	3,3	2,4	-	3,2	4,3	4	4	4	4
Autres	0,7	-	-	-	-	-	-	-	-
II. Demande totale (3):	269,6			..		..		..
Dépendance nette vis-à-vis de l'importation	55,4 %			54,7 %		55,7 %		55,4 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux Etats membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sources et usages non énergétiques compris.

Country:
 Pays : DEUTSCHLAND
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	120,7	149,4	- 0,5	120,9	135,9	+ 5,8	147,0	194,0	173,0	220,0
solid fuels/combust. solides/feste Brennst.	92,0	- 10,3	+ 1,5	91,5	- 14,9	+ 8,1	91,0	(- 4,0)	88,0	(- 4,0)
Oil/pétrole/Mineralöl	6,7	145,1	- 2,0	6,2	132,2	- 2,3	6,0	(154,0)	5,0	(171,0)
Natural gas/ gaz nat. Erdgas	15,3	12,2	-	15,8	17,2	-	18,0	43,0	19,0	52,0
Nuclear / nucléaire Kernbrennstoffe	2,7	-	-	2,8	-	-	28,0	-	57,0	-
others/autres/sonstige	4,0	2,4	-	4,6	1,4	-	4,0	(1,0)	4,0	(1,0)
<u>Demand-Demande-Bedarf(3)</u>		269,6			262,6			341,0		393,0
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					52 %			57 %		56 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP					+ 0,6 %			+ 3,5 % à + 4 %		+ 3,5 % à + 4 %

(1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE / die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker.

Objectifs énergétiques et Programmes d'investissements : FRANCE

Bilans prévisionnels d'énergie

en Mio tce	OSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
I. Offre d'énergie:	39,5	146,1	- 0,6	43,8	144,3	52,4	167	..	..
soit: Combust. solides	17,2	10,1	+ 1,4	20,5	10	15	17	11	19
Pétrole (3)	1,9	128,9	- 1,7	2,1	127	1,3	131		114
Gaz naturel	6,4	7,7	- 0,4	7,5	7,3	7	19		37
Energie nucléaire	3,3	-	-	3,1	-	15,6	-	60	-
Electr. hydr. & géoth.	10,6	- 0,6	-	10,6	-	13,5	-	14	-
Autres	0,1	-	-	-	-	-	-	3	-
II. Demande totale (3):		185,0		188,1		219,4		258	
Dépendance nette vis-à-vis de l'importation		79 %		77 %		76 %		de l'ordre de 60 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux Etats membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sources et usages non énergétiques compris.

20.10.1975

Country: FRANCE
 Pays : FRANCE
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	39,5	146,1	- 0,6	39,5	148,9	- 8,9	52,4	167,0	95,0	163,0
solid fuels/combust. solides/feste Brennst.	17,2	10,1	+ 1,4	15,4	13,7	- 0,2	15,0	17,0	11,0	19,0
Oil/pétrole/Mineralöl	1,9	128,9	- 1,7	1,8	126,0	- 7,4	1,3	131,0	(1,0)	(113,0)
Natural gas/ gaz nat. Erdgas	6,4	7,7	- 0,4	6,4	9,2	- 1,3	7,0	19,0	(6,0)	(31,0)
Nuclear / nucléaire Kernbrennstoffe	3,3	-	-	3,2	-	-	15,6	-	60,0	-
others/autres/sonstige	10,7	- 0,6	-	12,7	- 0,0	-	13,5	-	17,0	-
<u>Demand-Demande-Bedarf(3)</u>		185,0			179,5			219,4		258,0
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					83 %			76 %		63 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP					+ 3,8 %			+ 4,9 %		+ 5,0 %

- (1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE / die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.
 (2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften
 (3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker

Objectifs Énergétiques et Programmes d'investissements : IRELAND

Bilans prévisionnels d'Énergie

en Mio ton	CSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
I. Offre d'énergie:	1,19	6,07	+ 0,27	..	..	2,03	7,03	2,16	8,63
soit: Combust. solides	1,02	0,49	+ 0,22	..	1,58	1,25	0,63	1,38	0,63
Pétrole (3)	-	5,57	+ 0,05	-	5,70	-	5,40	-	8,00
Gas naturel	-	-	-	-	-	0,16	-	0,16	-
Énergie nucléaire	-	-	-	-	-	-	-	..	-
Electr. hydr. & géoth.	0,17	0,01	-	0,55	-	0,62	-	0,62	-
Autres	-	-	-	-	-	-	-	-	-
II. Demande totale (3):	7,53			7,83		9,06		10,79	
Dépendance nette vis-à-vis de l'importation		80,6 %		..		77,6 %		80 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Énergie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux États membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sources et usages non énergétiques compris.

Country:
 Pays : IRELAND
 Land :

Forecast demand / supply for primary energy : member countries estimates (1) REV. 1
 Pr vision de la demande / offre d' nergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Prim renergie : Sch tzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Pr�vision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsver�nder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestandsver�nder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t R�E										
<u>Supply-Offre-Angebot</u>	1,19	6,07	+ 0,27	1,29	5,98	+ 0,16	2,51	7,03	2,64	8,63
solid fuels/combust. solides/feste Brennst.	1,02	0,49	+ 0,22	1,08	0,59	+ 0,16	1,25	0,63	1,38	0,63
Oil/p�trole/Mineral�l	-	5,57	+ 0,55	-	5,39	-	-	6,40	-	8,00
Natural gas/ gaz nat. Erdgas	-	-	-	-	-	-	1,10	-	1,10	-
Nuclear / nucl�aire Kernbrennstoffe	-	-	-	-	-	-	-	-	..	-
others/autres/sonstige	0,17	0,01	-	0,21	-	-	(0,16)	-	(0,16)	-
<u>Demand-Demande-Bedarf(3)</u>		7,53			7,43			9,54		11,27
Net import dependence D�pendance nette de l'importation Nettoimportabh�ngigkeit					80 %			74 %		77 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP					+ 0,4 %			+ 4 %		+ 4 %

- (1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adopt es par l'OSCE/
 die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.
- (2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communaut s Europ ennes /
 SAEG: Statistisches Amt der Europ ischen Gemeinschaften
- (3) Inland consumption + bunkers / Consommation int rieure + Soutes / Inlandsverbrauch + Bunker.

Objectifs énergétiques et Programmes d'investissements : ITALIA

Bilans prévisionnels d'énergie

en Mio tep	OSCE (1)			Réponse au Questionnaire du 23/7/75 (2)					
	1974			1974		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
I. Offre d'énergie:	24,1	115,7	- 2,0	25,4	111,7	32,7	142,1	38,4	181,3
soit: Combust. solides	0,3	8,7	+ 0,2	0,3	11,3	0,3	14,8	0,3	14,8
Pétrole (3)	1,1	103,0	- 2,2	1,1	98,5	3,0	109,9	3,0	119,5
Gaz naturel	12,8	3,5	-	13,9	1,9	17,0	16,2	22,0	19,0
Energie nucléaire	0,7	-	-	0,8	-	0,8	1,2	1,0	28,0
Electr. hydr. & géoth.	8,9	0,5	-	9,3	-	11,6	-	12,1	12,3
Autres	0,3	-	-	-	-	-	-	-	-
II. Demande totale (3):		137,8		137,1		174,8 à 185,8		219,7 à 262,6	
Dépendance nette vis-à-vis de l'importation		84 %		81 %		81 % à 82 %		83 % à 85 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975 (rév.)

(2) Questionnaire envoyé par la Commission aux Etats membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sautes et usages non énergétiques compris.

20.10.1975

Country: Forecast demand / supply for primary energy : member countries estimates (1)
 Pays : ITALIA Pr vision de la demande / offre d' nergie primaire : estimations des Etats membres (1)
 Land : Voraussichtlicher Bedarf / Versorgung an Prim renergie : Sch tzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Pr�vision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestands-ver�nder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestands-ver�nder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t R�E										
Supply-Offre-Angebot	24,0	113,4	- 2,2	24,1	115,7	- 2,0	33,9	138,8 � 149,8	66,4 � 73,2	151,2 � 187,3
solid fuels/combust. solides/feste Brennst.	0,3	7,7	-	0,3	8,7	+ 0,2	0,3	(12,7)	0,3	(12,7)
Oil/p�trole/Mineral�l	1,1	103,8	- 2,2	1,1	103,0	- 2,2	3,0	109,9 � 120,9	3,0	119,5 � 155,6
Natural gas/ gaz nat. Erdgas	12,8	1,7	-	12,8	3,5	-	17,0	16,2	22,0	19,0
Nuclear / nucl�aire Kernbrennstoffe	0,7	-	-	0,7	-	-	2,0	-	29,0 � 35,6	-
others/autres/sonstige	9,1	0,2	-	9,2	0,5	-	11,6	-	12,1 � 12,3	-
Demand-Demande-Bedarf(3)		135,2			137,8		172,7 �	183,7	217,6 �	260,5
Net import dependence D�pendance nette de l'importation Nettoimportabh�ngigkeit					84 %		80 % �	82 %	70 % �	72 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des ESP					+ 3,4 %		+ 4 % �	+ 5 %	+ 5 % �	+ 6 %

(1) The balance-sheets are based on the conventions adopted by the SOEC/ Les bilans se fondent sur les conventions adopt es par l'OSCE/
 die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communaut s Europ ennes /
 SAEG: Statistisches Amt der Europ ischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation int rieure + Soutes / Inlandsverbrauch + Bunker

Objectifs énergétiques et Programmes d'investissements: LUXEMBOURG

Bilans prévisionnels d'énergie

en Mio tep	OSCE (1)			Réponse au Questionnaire du 23/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
<u>I. Offre d'énergie:</u>	0,02	5,07	-	0,02	4,92	0,01	5,42	0,98	4,97
soit: Combust. solides	-	2,50	-	-	2,53	-	2,33	-	2,10
Pétrole (3)	-	1,68	-	-	1,61	-	2,00	-	2,52
Gas naturel	-	0,22	-	-	0,24	-	0,35	-	0,35
Energie nucléaire	-	-	-	-	-	-	-	0,97	-
Electr. hydr. & géoth.	0,02	0,67	-	0,02	0,49	0,01	0,74	0,01	-
Autres	0	-	-	-	-	-	-	-	-
<u>II. Demande totale (3):</u>		5,09		4,94		5,43		5,95	
Dépendance nette vis-à-vis de l'importation		99,6 %		99,6 %		99,8 %		83,5 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975.

(2) Questionnaire envoyé par la Commission aux Etats membres le 23.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour scutes et usages non énergétiques compris.

Country:
 Pays : LUXEMBOURG
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestands-veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des Bestands-veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
Supply-Offre-Angebot	0,02	5,07	-	0,03	5,35	+ 0,06	0,01	5,42	0,98	4,97
solid fuels/combust. solides/feste Brennst.	-	2,50	-	-	2,69	+ 0,06	-	2,33	-	2,10
Oil/pétrole/Mineralöl	-	1,68	-	-	1,47	-	-	2,00	-	2,52
Natural gas/ gaz nat. Erdgas	-	0,22	-	-	0,30	-	-	0,35	-	0,35
Nuclear / nucléaire Kernbrennstoffe	-	-	-	-	-	-	-	-	0,97	-
others/autres/sonstige	0,02	0,67	-	0,03	0,89	-	0,01	0,74	0,01	-
Demand-Demande-Bedarf(3)		5,09			5,44			5,43		5,95
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					98 %			100 %		84 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP					+ 4,5 %			..		..

(1) The balance-sheets are based on the conventions adopted by the SOEC/ Les bilans se fondent sur les conventions adoptées par l'OSCE/ die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker

Objectifs énergétiques et Programmes d'investissements : NEDERLAND

Bilans prévisionnels d'énergie

en Mio tep	OSCE (1)			Réponse au Questionnaire du 23/7/75 (2)					
	1973			1973		1980		1985	
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
I. Offre d'énergie:	57,8	15,9	- 0,2	62,9	1,7	82,5	5,2	70,6	27,1
soit: Combust. solides	1,2	1,7	+ 0,3	1,4	1,5	-	5,1	-	7,2
Pétrole (3)	1,6	40,2	- 0,5	1,2	28,2 (z)	1,6	43,0 (z)	1,6	58,0 (z)
Gaz naturel	54,8	- 25,7	-	60,2	- 28,0	80,6	- 42,9	67,0	- 38,1
Energie nucléaire	0,2	-	-	0,1	-	0,3	-	2,0	-
Electr. hydr. & géoth.	-	- 0,3	-	-	-	-	-	-	-
Autres	-	-	-	-	-	-	-	-	-
II. Demande totale (3):	73,5			64,6		87,7		97,7	
Dépendance nette vis-à-vis de l'importation	22 %			3 %		6 %		28 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Energie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux Etats membres le 23.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour sources et usages non énergétiques compris.

(z) Ces données ne prennent pas en compte les besoins pour sources qui s'élevaient à 12 Mio tep en 1973.

20.10.1975

Country:
 Pays : NEDERLAND
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestands-veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestands-veränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	57,8	15,9	- 0,2	67,8	4,3	- 2,1	83,0	17,2	74,1	39,1
solid fuels/combust. solides/feste Brennst.	1,2	1,7	+ 0,3	0,5	2,4	-	-	5,1	-	7,2
Oil/pétrole/mineralöl	1,6	40,2	- 0,5	1,6	35,9	- 2,1	1,6	(55,0)	1,6	(70,0)
Natural gas/ gaz nat. Erdgas	54,8	25,7	-	65,0	- 33,7	-	80,6	- 42,9	67,0	- 38,1
Nuclear / nucléaire Kernbrennstoffe	0,2	-	-	0,7	-	-	(0,8)	-	(5,5)	-
others/autres/sonstige	-	- 0,3	-	-	- 0,3	-	-	-	-	-
<u>Demand-Demande-Bedarf(3)</u>		73,5			70,0			100,2		113,2
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					6 %			17 %		35 %
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des ESP					+ 1,8 %			+ 3,5 % à + 4 %		+ 3,5 % à + 4 %

(1) The balance-sheets are based on the conventions adopted by the SOEC/ Les bilans se fondent sur les conventions adoptées par l'OSCE/ die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker

Objectifs énergétiques et Programmes d'investissements : UNITED KINGDOM

Bilans prévisionnels d'énergie

en Mio tce	CSCE (1)			Réponse au Questionnaire du 28/7/75 (2)					
	1973			1973	1980	1985			
	Production intérieure	Importation nette	Variations des stocks	Production intérieure	Importation nette	Production intérieure	Importation nette	Production intérieure	Importation nette
I. Offre d'énergie:	116,3	113,2	- 1,3	111	116	251 à 281	6 à -24	262 à 317	26 à -29
soit: Combust. solides	82,8	- 1,0	- 1,2	79	- 1	82	-	82 à 86	4 à 0
Pétrole (3)	0,4	113,5	- 0,1	1	116	104 à 134	-2 à -32	104 à 155	16 à -35
Gaz naturel	24,9	0,7	-	24	1	51	8	58	6
Energie nucléaire	7,2	-	-	6	-	13	-	17	-
Electr. hydr. & géoth.	1,0	-	-	1	-	1	-	1	-
Autres	-	-	-	-	-	-	-	-	-
II. Demande totale (3):		228,2		227		257		288	
Répondance nette vis-à-vis de l'importation		50 %		51 %		2 % à -9 %		9 % à -10 %	

(1) Office Statistique des Communautés Européennes : Statistiques de l'Énergie, Bulletin trimestriel 2-1975

(2) Questionnaire envoyé par la Commission aux États membres le 28.7.75 sur "les objectifs énergétiques et les programmes d'investissements..."

(3) Besoins pour scoutes et usages non énergétiques compris.

27.11.75

REV. 1

Country:
 Pays : UNITED KINGDOM
 Land :

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
M toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	116,3	113,2	- 1,3	109,2	112,7	- 2,3	235 à 270	20 à -15	240 à 310	50 à -20
solid fuels/combust. solides/feste Brennst.	82,8	- 1,0	- 1,2	69,2	0,3	+ 2,5	(85)	-	(85) à 90)	5 à 0
Oil/pétrole/Mineralöl	0,4	113,5	- 0,1	0,5	111,9	- 4,8	(100 à 130)	10 à -25	(100 à 150)	(35 à -30)
Natural gas/ gaz nat. Erdgas	24,9	0,7	-	30,1	0,5	-	35 à 40	10	35 à 50	10
Nuclear / nucléaire Kernbrennstoffe	7,2	-	-	8,5	-	-	14	-	19	-
others/autres/sonstige	1,0	-	-	0,9	-	-	1	-	1	-
<u>Demand-Demande-Bedarf(3)</u>		228,2			219,6		255		290	
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit					51 %		8 % à - 6 %		17 % à - 7 %	
Rate of growth of GDP Taux de croissance de PIB Zuwachsrates des BSP					0		+ 3 %		+ 3 %	

(1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE / die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker.

27.11.75

Country:
 Pays : COMMUNAUTE
 Land : EUR-9

Forecast demand / supply for primary energy : member countries estimates (1)
 Prévision de la demande / offre d'énergie primaire : estimations des Etats membres (1)
 Voraussichtlicher Bedarf / Versorgung an Primärenergie : Schätzungen der Mitgliedstaaten (1)

REV. 2

	Situation - Lage						Forecast - Prévision - Aussicht			
	1973 (2)			1974 (2)			1980		1985	
	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	Variations in stocks des stocks Bestandsveränder.	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr	indigenous production nationale Einheim. Produktion	net imports importat. nettes netto Einfuhr
Net toe Mio tep Mio t RÖE										
<u>Supply-Offre-Angebot</u>	365,3	613,0	- 4,4	368,4	592,7	- 12,5	563 à 598	620 à 596	668 à 745	720 à 686
solid fuels/comoust. solides/feste Brennst.	200,1	18,7	+ 3,3	183,2	22,9	+ 10,9	198	42	191 à 196	52 à 47
Oil/pétrole/Mineralöl	11,8	588,1	- 7,2	11,2	562,0	- 22,0	112 à 142	517 à 493	111 à 161	573 à 544
Natural gas/ gaz nat. Erdgas	114,3	4,1	- 0,5	130,2	5,5	- 1,4	159 à 164	59	150 à 165	94
Nuclear / nucléaire Kernbrennstoffe	14,1	-	-	16,0	-	-	64	-	162 à 169	-
others/autres/sonstige	25,0	2,1	-	27,8	2,3	-	30	2	34	1
<u>Demand-Demande-Bedarf(3)</u>	973,9			948,6			1183 à 1194		1388 à 1431	
Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit				62 %			52 % à 50 %		52 % à 48 %	
Rate of growth of GDP Taux de croissance de PIB Zuwachsrate des BSP				+ 1,9 %			+ 3,2 à + 3,5%		+ 3,2 à + 3,5%	

(1) The balance-sheets are based on the conventions adopted by the SOEC / Les bilans se fondent sur les conventions adoptées par l'OSCE / die Bilanzen beruhen auf den vom SAEG angewandter Bestimmungen.

(2) SOEC: Statistical Office of the European Communities / OSCE: Office Statistique des Communautés Européennes / SAEG: Statistisches Amt der Europäischen Gemeinschaften

(3) Inland consumption + bunkers / Consommation intérieure + Soutes / Inlandsverbrauch + Bunker.

Appendix 2

Comparison between forecasts drawn up by the Member States
 and the Community Energy Policy Objectives for 1985

Introduction : The Objectives

The target figures adopted by the Council are designed to reduce the Community's dependence on non-member countries for imported energy, especially oil. The percentage of imported energy should fall from 63 % in 1973 to 50 %, and if possible 40 %, by 1985.

To this end, primary energy requirements, which, in view of the large-scale efforts being made to reduce energy consumption, should not exceed 1,475 M toe in 1985, would be covered as follows :

	For the record		1985 targets (figures rounded off)	
	1973 estimates	1985 initial forecasts	50 % dependence	40 % dependence
Solid fuels	22.6	10	17	17
Oil	61.4	64	49	41
Natural gas	11.6	15	18	23
Hydro-electric and geothermal power	3	2	3	3
Nuclear power	1.4	9	13	16
Total requirements	100	100	100	100

In its Resolution of 17 December 1974, the Council set out these objectives in detail, covering both energy consumption in general and the production and imports of each source of energy. Reference is made to these guidelines in the various parts of the report, which deals with demand and supply in turn.

This first report is primarily based on the comparison between the 1985 targets and the total current energy forecasts drawn up by the Member States of the Community and ascertained from a questionnaire which was answered in October 1975.

To interpret the results of this comparison, a clear distinction must be made between the concept of forecasting as understood by most Member States and the concept of an objective used to shape the Community's energy policy : the objectives of the joint energy policy are designed to put the nature and scale of the Community's political undertaking into tangible form in order to map out a particular configuration for its supply structure. These objectives constitute both a policy guide for the Member States and, at the same time, major guidelines for energy producers and consumers in the Community.

27.11.75

Comparison between Council Resolution of 17 December 1974
and Member Countries' papers on energy objectives of September 1975.

REVISION 2

Comparaisons entre Résolution du Conseil du 17 décembre 1974

et Documents des Etats membres sur les objectifs énergétiques de septembre 1975.

Vergleich zwischen Entschliessung des Rates vom 17. Dezember 1974

und Beiträge der Mitgliedstaaten zu Energiezielen von September 1975.

Community Communauté EUR-9 Gemeinschaft M toe - Mio tep - Mio t RÖE	Objectives for 1985 Objectifs pour 1985 Ziele für 1985 (17 Déc. 74) 50 % 40 %	Member States' prosp. Persp. Etats membres Perspektieven der Mit- gliedstaaten - 1985 (Sept. 75)	Difference (object. 50 %) Unterschied (Ziele 50 %)
I. Demand - Demande - Bedarf	1475	..	..
of wich: a) Inland consumption soit: Consommation intérieure davon: Inlandsverbrauch	1400	1388 * 1431	- 62 * - 19
b) Bunkers-Soutes-Bunker	50		(-4,3%) * (-1,3%)
c) Export. - Ausfuhr	25		..
II. Supply - Offre - Angebot			
1) <u>Indigenous production-Production nationale - einheim. production</u>	800 900	668 * 745	- 132 * - 55 (-16,5%) * (-6,2%)
of wich: a) solid fuels-combustibles soit: solides - feste Brennst. davon: b) oil - pétrole - Mineralöl	210	191 * 196	- 19 * - 14
c) Natural gas - gaz nat. Erdgas	180	111 * 161	- 69 * - 19
d) Nuclear - nucléaire Kernbrennstoffe	175 225	150 * 165	- 25 * - 10
e) others-autres-sonstige	190 240	182 * 189	- 8 * - 1
	45	34	- 11
2) <u>Net imports - Importations nettes - Netto Einfuhr</u>	650 550	720 * 686	+ 70 * + 36 (+10,8%) * (+5,5%)
of wich: a) solid fuels-combustibles soit: solides - feste Brennst. davon: b) oil - pétrole - Mineralöl	40	52 * 47	+ 12 * + 7
c) Natural gas - gaz nat. Erdgas	515 395	573 * 544	+ 58 * + 29
d) others-autres-sonstige	95 115	94	- 1
	-	1	+ 1
3) <u>Net import dependence Dépendance nette de l'importation Nettoimportabhängigkeit</u>	45% 38%	52% * 48%	
III. Pattern of consumption (in %) Structure de la consom. (en %) Struktur des Verbrauchs (in %)	100	100	
of wich: a) solid fuels-combustibles soit: solides - feste Brennst. davon: b) oil - pétrole - Mineralöl	17	17,5 * 17,0	
c) Natural gas - gaz nat. Erdgas	49 41	49,5 * 49,5	
d) Nuclear - nucléaire Kernbrennstoffe	18 23	17,5 * 18,0	
e) others-autres-sonstige	13 16	13,0	
	3	2,5	

I. DEMAND FOR ENERGY

The objectives for 1985:

- A. To reduce the growth rate of energy consumption
- B. To change the structure of consumption by increasing the callion:reliable resources, i.e. stepping up the use of electricity as the nuclear sector develops.

A. Level of demand

Two factors govern the forecasts of the demand for energy:

- the economic development hypothesis (gross domestic product),
- the degree of elasticity between the growth of energy production and economic growth (energy/gross domestic product).

The forecasts drawn up by the Member States reveal that each of these factors gives rise to problems for the attainment of the objectives.

1. Economic growth

The hypotheses for the growth of the GDP adopted in the Member States⁽¹⁾ current forecasts result in a Community average of + 3.2% to + 3.5% per year for the entire period 1975 - 1985. The average growth of gross energy consumption⁽²⁾ for the same period works out at + 3.0% to + 3.25% per year. This relatively low rate compared with that for the period 1961 - 1973 (+ 4.8% per year) could be reduced still further if, as announced, certain countries were again to lower the economic growth hypotheses on which their energy forecasts are based.

Given though it is not possible to state definitely whether the slowdown in the increase in energy requirements, linked to a levelling off in the growth rate of the gross domestic product, is of a structural or purely short-term nature, thought must be given to the effects which a return to a growth rate similar to those of the past could have, when the forecasts have been based on hypotheses of very slow economic expansion.

(1) For details of the hypotheses for each country see Table 1 annexed hereto.

(2) Internal consumption + bunkers; for details for each country see Table 2 annexed hereto.

	Hypotheses for average growth 1973 - 1985		Gross energy consumption in 1985
	GDP	Energy	M.toe
Member States' current forecasts	+3.2%	+3.0%	1388
	+3.5%	+3.25%	1431
Targets for 1985	+4.0%	+3.5%	1450 (1)
Initial forecasts (January 1973)	+4.8%	+4.8%	1710 (2)

If, for example, the growth rate of the Community's gross domestic product were 0.5% higher, energy requirements would increase by at least 70 M.toe, the major part of which could be covered only by imported oil.

2. Elasticity energy/GDP

The ratio between the movement of gross energy consumption and the movement of the GDP (energy/GDP) resulting from the current forecasts presented by the Member States⁽³⁾ averages 0.9 for the Community for the period 1973 - 1985. During the period 1961 - 1973 the average elasticity was 1.

Average elasticities energy/GDP for the Community

	1973	1975 - 1980	1980 - 1985	1973 - 1985
Member States' current forecasts	1.07	1.12	0.78	0.925
Targets for 1985		1.03	0.82	0.875
Initial forecasts (January 1973)				1.0

(1) Targets for 1985: 1,475 M.toe i.e. 1450 M.toe gross consumption and 25 M toe exports

(2) Initial forecasts: 1,800 M.toe i.e. 1660 M.toe internal consumption + 50 M.toe bunkers + 90 M.toe exports

(3) For details for each country see Table 3 annexed hereto.

In the present circumstances there are many conflicting reasons for postulating either a greater or a lesser elasticity of the energy/GDP ratio, depending on the hypotheses chosen or the period considered. There is no overriding argument from which to draw conclusions with regard to the relatively short-term trend. In the medium/long term, however, the development of the policy for the rational utilization of energy⁽¹⁾ should lead to a considerable reduction in the degree of elasticity.

B. Structure of demand

1. Demand for energy

The forecasts presented by the Member States contain two types of hypotheses which influence the structure of demand:

- Energy consumption bracket linked to an economic alternative,
- differing hypotheses for internal production (same level of economic development.)

	1985 Objectives		Member States' current forecasts
	50%	40%	
Solid fuels	17	17	17,5 - 17,0
Oil	49	41	49,5 - 49,5
Natural gas	18	23	17,5 - 18,0
Hydro-electric and geothermal power and others	3	3	2.5
Nuclear energy	13	16	13.0
Total	100	100	100

The breakdown of demand between the various forms of energy resembles the breakdown for the 50% target. However, it must be pointed out that the reason for this is a lower level of demand, spread among all the forms of energy.

Thus, should the GDP grow at a rate exceeding current forecasts by 0.5% (hypothesis given above), oil would have to cover 51% of the requirements instead of 48% as forecast).

(1) The progress achieved in this field is described in a separate report, the first periodic report on the rational utilization of energy programme and proposals and recommendations from the Council Doc.XVII/258/rev. 3/75

2. Demand for electricity

The marked slackening of the growth rate of electricity demand in the Community countries has led some of them to revise the forecasts for short-term demand⁽¹⁾ and to defer decisions on part of their nuclear programmes.

	1985 targets	Member States' current forecasts
Forecast demand for electricity in 1985	2250 TWh	1910 - 1960 TWh
Proportion of electricity produced by nuclear plants	50%	45%
Proportion of energy demand covered by electricity	35%	32%
Proportion of overall energy demand covered by nuclear energy	13% - 16%	13%

Although it has slowed down, the growth in the demand for electricity should continue at a higher rate than that for energy demand.

Consequently, ^{if} nuclear energy should cover its proportion of gross energy consumption in the 50% target, its contribution to electricity production would be slightly reduced.

C. Structure of internal production

According to the hypotheses, total domestic production currently forecast for the Member States should reach 668-745 M.toe, the size of the spread being largely due to the uncertainty surrounding the United Kingdom's North Sea oil production.

M.toe	1985 targets	Member States' current forecasts
Solid fuels	210	191 - 196
Oil	180	111 - 161
Natural gas	175 - 225	150 - 165
Hydro-electric and geothermal power and others	45	34
Nuclear	190 - 240	182 - 189
	800 - 900	668 - 745

(1) See Table 4 of the Annex for country-by-country hypotheses.

The breakdown by forms of energy reveals that the forecasts for the various sources of energy are lower than the targets.

D. Structure of imports

According to the total forecasts by Member States, imports would cover 48-52 % of total demand. The total volume of imports forecasts (720 - 686 M.toe) would thus be higher than the figure based on the least favourable assumption contained in the targets, despite a lower level of demand.

The various energy sources' contribution to total imports is as follows:

	1985 targets	Member States' current forecasts
Coal	40	52 - 47
Oil	515 - 395	573 - 544
Natural gas (and others)	95 - 115	95
Total	650 - 550	720 - 686

According to current forecasts, oil would represent almost 80% of total energy imports in 1985.

E. Summary and problems raised by the Member States

Most of the downward adjustments in the level of energy demand forecast for 1985 result from the increasingly pessimistic trend of economic assumptions. A return to the GDP growth hypothesis of December 1974 could lead at present to a level of energy consumption for 1985 equal to or higher than that contained in the targets.

The choice of an economic hypothesis in line with the targets appears to be a determining factor to the extent that it influences the very structure of energy demand:

- lower forecasts for energy requirements affecting all forms of energy;
- greater requirements than forecast, which could really only be met by (imported) oil.

The forecasts for the demand for electricity appear to be largely influenced by the exceptional short-term economic situation of 1974 and 1975. The almost complete stagnation of demand prompted a reappraisal of the capacities required in the medium term for basic electricity production; these revised assessments have nearly all been applied to the nuclear capacity to be installed by 1985.

Among the problems which may arise, the following difficulties could prove an obstacle to the achievement of the 1985 demand targets:

- the effect of future economic development on energy consumption;
- the sensitivity of energy demand to price increments;
- the slackening of the penetration rate for electricity and, consequently, the scaling-down of nuclear programmes;
- the volume of investment sometimes required by the rational utilization of energy policy, and the effects of this policy.

II. Energy supply

A. Solid fuels

The targets for 1985: Community production of hard coal 180 M.toe
Brown coal and peat production 30 M.toe
Coal imports from non-member countries 40 M.toe

1. Internal production

According to the Member States' forecasts, domestic production of solid fuels in the Community in 1985 could amount to between 191 and 196 M.toe, or 19-14 M.toe (-9 - -7%) less than the target. The main difference stems from the forecast of production in Germany which is approximately 15 M.toe lower than the hypothesis used for the targets. On the other hand, an extension of peat production is contemplated in Ireland: the rise in oil prices has made some deposits economically exploitable.

2. Net imports

The current forecast of imports (47 - 52 M.toe) is higher than that of the target. It appears to reflect this source's increased share of supplies to power stations in some countries.

3. Summary and problems raised by the Member States

M.toe	1985 targets	Member States' current forecasts
Internal production	210	191 - 196
Net imports	40	52 - 47
Total	250	243

The total supply of solid fuels forecast for 1985 should be close to the target, provided that the profitability of internal production is assured and that import prices do not prove an obstacle to the trend that is currently forecast.

Coal mining appears to be faced by three main types of problem:

- environmental problems, mainly affecting open-cast mining of hard coal and brown coal;
- difficulties of finance, in view of large investments necessary for hard coal production;
- the problems arising from the necessary improvements in productivity, linked with labour problems etc.

Some countries consider it essential to solve these problems, which can only be tackled at a microeconomic level.

Present world prices militate against the conclusion of long-term import arrangements for the moment.

B. Oil

The targets for 1985: production: to reach 180 M.toe

reduction of total imports to 540 M.toe
(515 M.toe for net imports).

1. Internal production

Total current estimates by Member States suggest that the Community's crude oil production should reach 111 - 161 M.toe in 1985. There is a discrepancy of 69 - 19 M.toe between the current national forecasts and the Community target due to:

- the uncertainty surrounding the United Kingdom's forecasts (possible production should amount to between 100 and 150 M.t);
- hesitancy by other potential oil-producing countries as to possible production figures.

2. Net imports

The figure for net oil imports (crude and oil products) deduced from the oil supply pattern (demand less internal production) exceeds the 50% dependence target by at least 29 million t, or 6%. This is even more worrying in that the current forecasts are based on an energy growth rate lower than that of the target.

It should however be mentioned that part of the imported oil (50 million t) will probably come from the Norwegian sector of the North Sea.

3. Summary and problems raised by the Member States

M.toe	1985 targets		Member States' current forecasts
	50%	40%	
Internal production	180		111 - 161
Net imports	515 - 395		573 - 544
Total	695 - 575		684 - 705

The Member States' current forecasts correspond closely enough to the 50% target.

It should nevertheless be noted that:

- achieving the production target depends on a favourable outcome to current prospecting operations;
- it will not be enough to approach the minimum import target (50% dependence) if its achievement is based on reduced demand and if any subsequent growth in this demand can only be satisfied by additional oil imports.

Two types of problems seem to cause concern to those Member States which are current or potential producers of hydrocarbons:

- the technical difficulties of drilling at great depths or in the Arctic regions;
- the amount of investment needed for research and production at sea, the possible difficulties of financing them and the uncertainty surrounding the profitability of these investments.

In the broader framework of the oil situation as a whole, attention should be drawn to the problems which could arise as regards refining, either because of the existence of surplus capacity or because of a plant and equipment structure which is not suited to market requirements.⁽¹⁾

(1) This subject is dealt with in the document entitled "Investment projects in the oil sector: refining".

C. Natural gas

The targets for 1985: - production of at least 175, and if possible, 225 M.toe.

- imports to 95 - 115 M.toe.

1. Community production

The Member States' forecasts for 1985 show that the minimum production target for gas should be approached. However, it seems from information received from those Member States which are producers of natural gas that the maximum target will not be achieved because:

- the production of the principal producers will reach its ceiling around 1977 - 1980 and then drop considerably,
- the other producer countries are very cautious in their estimates of future levels of production.

Nevertheless, a successful outcome to current prospection in Italy and Ireland, in particular, could improve the overall Community outlook. Likewise, possible Danish participation in production in the Norwegian sector of the North Sea could bolster supplies.

2. Imports from non-Community countries

It seems from current forecasts which apply, in the main, to contracts which have been concluded or are planned that the lower target for natural gas imports (from a wide variety of sources) could be achieved. Nevertheless, the possibility of obtaining the extra 21 M.toe required to reach the upper target should not be completely ruled out; in most of the Member States the possibility of increased imports certainly exists.

3. Summary and problems raised by the Member States

	1985 targets	Member States' current forecasts
Community production	175 - 225	150 - 165
Net imports	95 - 115	94
Total	270 - 340	244 - 259

The Member States' forecasts for natural gas production and imports seem to meet the lower target for 1985.

There is perhaps more chance of meeting the upper target than in the case of other forms of energy insofar as:

- supplies should be increased by the addition of gas extracted in the production of oil;
- the lower import target already seems to have been met in the main by contracts which are either under way or are being negotiated, and later developments should not be ruled out.

Production problems are identical or very similar to those noted with regard to oil prospection and production.

The main problems affecting imports are:

- large financial contribution to investments in producer countries required under the conditions of the contracts;
- the problem of planning and investing in processing and transport units for imported gas.

There are also other more general problems affecting the gas industry:

- finding an optimum rhythm for exhausting deposits and optimum amortization of transport networks;
- establishing the desired concertation at a Community level on questions of gas supplies and transport;
- possibly limiting the use of gas for special purposes (premium fuel);
- determining how profitable certain deposits will be in the light of market conditions.

D. Nuclear energy

The targets for 1985: - installed capacity of at least 160 GWe and, if possible, of 200 GWe.⁽¹⁾

1. Nuclear energy production:

Current forecasts point to a total production of 182 - 189 M.toe, i.e. 8 - 51 M.toe less than the target. The shortfall is due mainly:

- in the first place, to the relatively small scale of the British nuclear programme which, even if it was decided to expand it, could no longer influence the energy market in 1985,
- in the second place, to the abandonment of all or part of certain national programmes which have not yet been officially accepted or are still being studied by the national parliaments concerned.

It should also be noted that there is a danger in some countries that some nuclear programmes already adopted may be revised in the light of the present levelling off of the electricity demand growth rate.

2. 2. Summary and problems raised by the Member States

M.toe	1985 targets		Member States* current forecasts
	50%	40%	
Nuclear production	190	- 240	182 - 189

Although it seems that the lower nuclear energy target will be achieved, two major problems are raised:

- the size of the financial programmes required for investment at all levels of nuclear production;
- the magnitude of the environmental problems (choice of sites, destruction of radioactive waste, etc.)
- magnitude of problems relating to the protection of the public and the environment ⁽²⁾

(1) equivalent to a production of 190 or 240 M.toe respectively.

(2) The Commission has the obligation of taking measures in these fields, in respect of the protection of health (Chapter V of the EAEC Treaty), the control and stocking of radioactive wastes, the study of problems of thermal effluent and of the choice of sites (environmental programme).

Table 1

GDP (according to country and Community) at 1973 prices and exchange rates

	1973 1000m. EUR	Average yearly variations (in volume)					1985 - 1000m. EUR73		Variations 1985/73
		1973/72	1974/73	1975/74	1980/75	1985/80	H1	H2	
	1	1	1	1	2	2			
Belgium	35.7	5.3	3.9	-1.5	+ 4.2	+4.4	55.7	55.7	+3.8
Denmark	21.9	4.2	1.6	-1.0	+3.5 to 4.0	+3.5 to	4.0 31.1	32.6	+ 3.0 /+ 3.4
Germany	276.1	5.2	0.6	-4.0	+3.5 to 4.0	+3.5 to	4.0 376.1	394.7	+ 2.6/ +3.0
France	199.7	5.8	3.8	-2.0	+ 4.9	+ 5.0	329.3	329.3	+4.3
Ireland	5.1	6.8	0.4	-3.6	+ 4.0	+ 4.0	7.3	7.3	+3.1
Italy	110.9	6.3	3.4	-3.0	+4.0 to 5.0	+5.0 to	6.0 172.7	190.0	+ 3.8% +4.6
Luxembourg	1.5	7.5	4.5	-6.3	..	..	2.2	2.2	+3.2
Netherlands	47.5	4.2	2.8	-2.0	+3.5 to 4.0	+3.5 to	4.0 67.8	71.1	+3.0/ +3.4
United Kingdom	137.9	5.4	0.7	-0.7	+3.0	+3.0	185.3	185.3	+ 2.5
Community	836.6	5.5	2.0	-2.4	3.9 to 4.2	4.1 to	4.4 1227.5	1268.2	+ 3.2/+ 3.5

1. Statistical Office of the European Communities

2. Member States' estimates.

Table 2

Gross energy consumption (according to country and Community)

	1973 M. toe	Average yearly variations (in %)					1985 M. toe	Variations (%) 1985/73
		1973/72	1974/73	1975/74	1980/75	1985/80		
Belgium	49.6	+ 5.2	- 3.6	- 11.0	+ 6.1	+ 5.1	73.5	+ 3.3
Denmark	20.3	- 0.9	- 9.4	- 1.0	+ 4.5	+ 2.9	25.8	+ 2.0
Germany	269.6	+ 6.6	- 2.6	- 4.0	+ 6.2	+ 2.9	393.0	+ 3.2
France	185.0	+ 9.2	- 3.0	- 4.0	+ 4.9	+ 3.3	258.0	+ 2.8
Ireland	7.5	+ 4.8	- 1.3	- 0.5	+ 6.4	+ 3.4	11.3	+ 3.5
Italy	135.2	+ 5.0	+ 1.9	+ 2.0	+4, 4 to 5, 7	+4,7 to 7, 2	217,6 to 260.5	+ 4.0 to 5.6
Luxembourg	5.1	+ 7.0	+ 6.9	..	+ 0.1	+ 1.9	5.9	+ 1.2
Netherlands	73.5	+ 5.7	- 4.8	- 0.5	+ 7.6	+ 2.5	113.2	+ 3.7
United Kingdom	228.2	+ 3.8	- 3.8	- 1.0	+ 3,1	+ 2.6	290,0	+ 2.0
Community	973.9	+ 5.9	- 2.6	- 2.5	5.0 to 5.2	3.25 to 3.7	1388.3 to 14312	+ 3.0 to 3.25

Table 3

Elasticity of increase in energy - increase in GDP (E/GDP)

	Year 1973	Period 1975 - 80	Period 1980 - 85	Average 1973 - 85
Belgium	0.98	1.45	1.16	0.87
Denmark	0.21	1.29 to 1.13	0.83 to 0.73	0.67 to 0.59
Germany	1.27	1.77 to 1.55	0.83 to 0.73	1.23 to 1.07
France	1.59	1.00	0.66	0.65
Ireland	0.71	1.60	0.85	1.13
Italy	0.79	1.10 to 1.14	0.94 to 1.20	1.05 to 1.22
Luxembourg	0.93	..	..	0.38
Netherlands	1.36	2.17 to 1.90	0.71 to 0.63	1.23 to 1.09
United Kingdom	0.70	1.03	0.87	0.80
Community	1.07	1.28 to 1.24	0.79 to 0.84	0.92 to 0.93

TABLEAU A.4.

STRUCTURE DE LA PRODUCTION D'ELECTRICITE / STRUCTURE OF ELECTRICITY PRODUCTION

Prévisions des Etats membres / Member States forecasts

- TWh -

		1975				1980				1985			
		Hydro.	Th. Cl.	Nucl.	Total	Hydro	Th. Cl.	Nucl.	Total	Hydro	Th. Cl.	Nucl.	Total
Belgique	A	0,9	37,8	5,6	44,3	1,8	46,7	15,0	63,5	1,8	35,4	54,4	91,6
	B	0,63	35,7	6,3	42,7	1,6	33,9	21,0	56,5	1,6	33,3	49,5	84,4
Danemark	A	-	19,4	-	19,4	-	27,9	-	27,9	-	36,3	-	36,3
	B	-	18,6	-	18,6	-	25,5	-	25,5	-	29,0	5,0	34,0
B.R. Deutschland		19,0	298,3	14,8	332,1	20,0	319,5	110,0	449,5	20,0	354,6	250,0	624,6
France	A	58,3	114,0	20,0	192,3	62,5	142,9	83,8	289,2	62,5	49,0	298,6	410,1
	B	58,3	114,0	20,0	192,3	62,5	142,9	83,8	289,2	62,5	49,0	298,6	410,1
Irlande	A	0,9	6,9	-	7,8	0,9	11,0	-	11,9	1,1	18,1	-	19,2
	B	0,9	6,9	-	7,8	0,9	9,2	-	10,1	1,1	12,6	-	13,7
Italie	A	45,5	106,5	3,5	155,5	49,9	187,9	9,0	246,8	52,3	155,9	161,8	370,0
	B	45,5	106,5	3,5	155,5	49,9	165,2	9,0	224,1	51,3	140,6	125,1	317,0
Luxembourg (2)		0,5	0,95	-	1,03	1,0	1,16	-	2,16	1,0	1,0	7,8	9,8
Hederland (1)		-	55,1	3,5	58,6	-	73,6	3,3	76,9	-	79,7	22,1	101,8
United Kingdom		5,0	250,0	35,0	290,0	5,0	290,0	58,0	353,0	5,0	348,0	84,0	437,0
Communauté	A	130,1	889,0	82,4	1101,1	141,1	1100,6	279,1	1520,8	143,7	1078,0	878,7	2100,4
	B	129,8	886,0	83,1	1098,7	140,9	1060,9	285,2	1487,7	142,5	1047,8	842,1	2032,4

(1) Sous réserve d'un avis favorable du Parlement en octobre prochain sur la politique nucléaire/Subject to Parliamentary in October, approval of nuclear programme.

(2) Estimation provisoire - services C.E. - septembre 1975/Provisional estimation - Commission Services - September 1975

A, B = Hypothèses alternatives/Alternative hypotheses.