

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(85) 245 final

Brussels, 28 May 1985

New Community Energy Objectives

Communication from the Commission to the Council

COM(85) 245 final

SUMMARY

1. In 1980 the Energy Council agreed on Community energy objectives for the year 1990 and invited the Commission to monitor progress towards those goals. The Commission's review of Member States' energy policies last year showed that there had been considerable improvements in the Community's energy situation and that the 1990 objectives were now almost certain to be achieved.
2. The 1990 objectives are however losing their relevance. Most energy decisions taken in the next few years will not show their results until after the end of this decade. It is therefore important that the Community should underline the need to continue with effective energy policies by adopting new longer-term objectives.
3. The Commission has recently completed a study of energy prospects to the end of the century which has served to identify the main factors which are likely to determine the Community's future energy situation, and the risks which will need to be avoided. On the basis of that study and the 1984 review, the Commission is now putting forward a series of new objectives for 1995. These objectives are designed to ensure that the economic and social development of the Community is underpinned by a secure and efficient energy economy.
4. The Commission is inviting the Council to adopt both **horizontal** and **sectoral** objectives. It is proposed that overall energy policies should be guided by horizontal objectives in the following areas:
 - external relations;
 - integration of the Community energy market;
 - energy security;
 - energy pricing;
 - environmental impact;
 - regional development;
 - energy technology.
5. In addition the following sectoral objectives are proposed, in all except the last case for the year 1995:
 - at least a further 25% improvement in energy efficiency;
 - less than one-third of energy consumption to be met by oil imports;
 - to maintain, and if possible increase, the market share of natural gas;

- to maintain, and if possible increase, the market share of solid fuels;
- not more than 10% of electricity to be generated from oil and gas;
- approximately 40% of electricity to be generated from nuclear power;
- a tripling in new and renewable energy production by the end of the century.

6. These objectives are justified and defined in more detail in the main text. Annexed to the Communication is a draft Resolution setting out the proposed objectives for agreement by the Council.

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CONTENTS

	<u>Paragraphs</u>
I. INTRODUCTION	1-3
II. THE ENERGY SITUATION	
i) The International Energy Situation	4-6
ii) The Energy Situation in the Community	7-11
III. COMMUNITY ENERGY POLICY AND THE ROLE OF OBJECTIVES	
i) Policy Aims	12-13
ii) Rôle of Member States and the Community	14-15
iii) The Relevance of Common Energy Objectives	16-18
IV. THE CASE FOR ADOPTING NEW OBJECTIVES	19-25
V. THE PROPOSED OBJECTIVES	
i) Horizontal Energy Objectives	26
- External Relations	27-30
- Internal Energy Market	31-35
- Energy Security	36-40
- Energy Pricing	41-43
- Environment	44-47
- Regional Development	48-51
- Technological Innovation	52-55
ii) Sectoral Objectives	
- Efficient Use of Energy	56-62
- Oil Import Dependence	63-67
- Natural Gas	68-72
- Solid Fuels	73-77
- Electricity Generation	78-82
- New and Renewable Energies	83-88
iii) Effect of Enlargement	89
VI. CONCLUSIONS	90-93
 Annex I - Draft Council Resolution	

I. INTRODUCTION

1. For the past five years, the Community's energy policy has been guided by agreed common objectives for the year 1990. These now seem likely to be achieved. At the Energy Council meeting on 13 November 1984 the Commission expressed its intention to put forward new objectives for the longer term. In this paper the Commission discusses what policies are needed in the current energy situation and proposes qualitative and quantitative objectives for 1995. These objectives are designed to ensure continued restructuring of the Community's energy sector in the next ten years and beyond. The strategy for the development of the Community laid down in the **Commission's 1985 Programme** must be underwritten by a secure and efficient energy economy.
2. In putting forward these objectives the Commission has worked from a stronger base of information and analysis than in past exercises. The present Communication takes account of the detailed review of Member States' energy policies in 1984^{1, 2, 3} of the Commission's Energy 2000 study⁴ and of the findings of the Nuclear Indicative Programme⁵.
3. Section II of this paper describes briefly the world and Community energy situations which are the essential framework for the new objectives. Section III discusses the aims of Community policy, the rôle of the Commission and Member States, and the relevance of energy objectives at Community level.

1 COM(84)88 final.

2 COM(84)87 final.

3 COM(84)693 final.

4 SEC(85)324 final.

5 COM(84)653 final.

Section IV sets out the reasons for adopting new objectives for 1995 and Section V presents the Commission's recommendations for horizontal and sectoral objectives to guide energy policy over the next ten years. Section VI contains a general summary of the paper's conclusions.

Finally, this Communication is accompanied by a draft Council Resolution, setting out the proposed 1995 objectives for agreement by the Member States (Annex I).

II. THE ENERGY SITUATION

i) The International Energy Situation

4. The structure of world energy supply and consumption has undergone a fundamental change since the two oil crises. Initially, economic recession was a major factor in reducing energy demand. But as the world economy comes out of recession, it is clear that there have been permanent structural changes in the pattern of energy use. Successful energy policy measures, particularly in the industrialised countries, together with the reaction of the market to higher oil prices, have improved energy efficiency, reduced oil demand and led to a considerably easier world energy market situation.
5. Nevertheless, oil still accounted for over 38% of (commercial) world energy supply in 1983, and, outside the centrally-planned economies, 46% of industrialised countries' needs. Solid fuels met over 30% of world needs in 1983, and natural gas accounted for a further 18%. The remaining 14% was covered by hydro-power, nuclear energy and other sources.

World energy consumption, including oil consumption, will continue to rise during the rest of this century and beyond. The fast growing energy requirements of the developing and newly industrialised countries will be the major factor, and oil will account for an

important part of their additional needs. So, although its use is unlikely to grow much in the industrialised countries, oil will probably still account for over 30% of world needs by the year 2000.

6. For at least the rest of this century, therefore, the world will remain highly dependent on oil. There is no basic shortage of oil reserves but various obstacles could hinder the availability of oil production. The reference projection in the Energy 2000 study suggests that world oil consumption could rise to 70 million barrels a day (MBPD) by the end of the century, as against 56 MBPD in 1983. This level of demand could possibly be satisfied, but there is little or no safety margin available to deal with adverse developments such as faster growth in developing countries' needs, slower oil substitution, or a downturn in oil exploration. It is of course not improbable that one or more of these difficulties will arise. At some point in the 1990s, or early next century, therefore, there could well be a renewed period of tight oil markets and sharply rising prices, bringing about an economic recession as in the past. And there will always be security of supply risks because most of the world's oil reserves are located outside the major consumer regions; particularly in the Middle East where political tensions continue. In this uncertain situation, it is clearly essential that the Community, and other countries, should continue with effective policies.

ii) The Energy Situation in the Community

7. Detailed descriptions of the Community's energy situation and prospects are contained in other documents. The following paragraphs summarise recent energy developments, the main results of the review of Member States' energy policies in 1984 and the relevant conclusions of the Energy 2000 study.
8. Total energy consumption in the Community fell by over 6% between 1973 and 1983, although GDP grew by over 18% during the same period. The share of oil in total energy consumption was reduced from 62% to 48%. Imported oil accounted for only 32% of total energy needs in

1983, compared with 62% ten years earlier. Consumption of natural gas increased sharply during this period and there was a more than fourfold increase in nuclear electricity production. The overall consumption of solid fuels did not rise, but their use in the electricity sector increased.

9. In keeping with its 1990 energy policy objectives⁶, therefore, the Community succeeded in cutting the link between energy consumption and economic growth, in increasing the rôle of solid fuels and nuclear energy in electricity generation and in reducing the share of oil in the energy mix. North Sea oil production also helped to cut dependence on oil imports substantially.
10. The analysis of Member States' energy policies and the outlook for 1990 carried out by the Commission and the Council last year indicated that further progress along these lines should be achieved during the rest of this decade. Provided that there are no major shocks on world energy markets, the Community's energy objectives for 1990, should be met at Community level. Indeed the quantitative objective for electricity generation - at least 70-75% solid fuels plus nuclear by 1990 - has already been achieved. There are, however, important variations among Member States reflecting their very different energy and economic circumstances.
11. The Commission services have recently completed, after consultation with experts from Member States, a detailed study of how the Community's energy situation may develop in the rest of the century⁷. The study has helped to identify the factors which seem likely to influence most strongly the long-term outlook. These are:
 - i) **Energy efficiency.** It is clear that further improvements in energy efficiency will be made, but the question is how rapidly will such changes take place.

⁶ Official Journal C149 of 18 June 1980.

⁷ Energy 2000 SEC(85)324 final.

- ii) Developments in the **electricity sector**, particularly the rate of growth in electricity demand and the expansion of nuclear output. The level of solid fuels consumption will also depend crucially on this sector.
- iii) The level of **indigenous energy production**. The possible decline in the Community's own oil, gas and possibly coal production could increase the Community's dependence on the outside world by the end of the century.
- iv) **Interfuel competition**. Trends in relative prices and other competitive factors will ultimately determine the market market shares of oil, gas and solid fuels.

These factors are discussed in more detail in Section V of this Communication.

III. COMMUNITY ENERGY POLICY AND THE ROLE OF OBJECTIVES

i) Policy Aims

12. The energy problem is a key one in all industrialised societies. The essential need is that the energy required by final consumers should be made available and that it should be provided at acceptable cost. In a Resolution in March 1983⁸ the European Parliament stressed that an effective Community energy policy was needed to ensure that energy was supplied at advantageous prices, with the minimum risk of supply interruptions, so as to make it possible to achieve economic growth and social progress. The events of the 1970s showed how sudden energy price increases, instigated by the threat of supply shortages, could affect the quality of life and undermine the functioning of the

⁸ European Parliament Resolution of 11 March 1983 (ref Official Journal C96 of 11 April 1983).

economy. **Security of supply**, and the **minimisation of costs** through competition and greater efficiency, must therefore remain the fundamental aims of the Community's energy policy.

13. This approach to energy policy must take account of the wider context of the Community's other sectoral policies and support the Community's economic and social goals. Most other policy aims, such as the strengthening of the internal market, transport policy, the development of the industrial sector and job creation, will be consistent with, and indeed reinforced by, an effective energy policy. In other cases there may be conflicts to be resolved. Environment policy is a notable example in this sense. There will also be strong interactions between energy developments and **regional policy**. Specific objectives on these two areas are suggested below.

ii) Rôle of Member States and the Community

14. It is common ground that the success of Community energy policy will rest very largely on the rôle of Member States in executing their national policies. This is inevitable, although movement towards a more integrated common market in energy will reinforce the development of common solutions. But national actions are not always the most effective approach. There are and will be areas, for instance energy technology and research, where it will enhance effectiveness and reduce overall costs if national efforts are supplemented or even replaced with multiannual programmes at Community level. In a January 1984 Resolution⁹, the European Parliament stressed that "joint Community action is indispensable where there is a reasonable certainty that significantly greater benefit will be achieved by action at Community level than can be achieved by each Member State acting on its own."

⁹ European Parliament Resolution of 19 January 1984 (ref Official Journal C46 of 22 February 1984).

15. Other important Community-level activities, which were stressed by the Energy Council in November 1983, are **monitoring** and **co-ordination**. Their economic interdependence gives all the Community countries an interest in co-ordinated and convergent action. The past decade has shown that co-ordinated energy policies can assist Member States in overcoming the impact of energy problems on economic growth and employment. The Commission has the task of monitoring and reporting on national efforts to ensure that this co-ordinated effort is sustained.

iii) The Relevance of Common Energy Objectives

16. The key to this co-ordinated approach, and the basis for the Commission's monitoring rôle, is the adoption of Community energy objectives. For the past ten years, the Community and its Member States have been working towards common energy policy goals, based on Community objectives adopted by the Council in 1974¹¹ and in 1980¹². Even though the energy situations of Member States differ, the adoption of objectives at Community level has represented a **consensus** on energy priorities and has underlined the **direction** which national policies should take.
17. The results of the last review of Member States' energy programmes have shown that this coherent policy approach has been successful. Through co-ordinated efforts it has been possible to reduce oil consumption, increase energy efficiency and improve security of supplies. Furthermore, the regular monitoring of progress by the Commission and the Council has strengthened national efforts, enabled governments to better understand the energy problems of their partners, and helped to create an atmosphere of mutual understanding and co-operation within the Community. In its conclusions on 13 November 1984¹³ the Energy Council reaffirmed the importance of

¹¹ Official Journal C153 of 9 July 1975.

¹² Official Journal C149 of 18 June 1980.

¹³ Ref Council Press Release 10441/84 (Presse 190).

common energy objectives and of the Commission's monitoring rôle.

18. The existence of agreed Community energy objectives is also important in terms of relations with the outside world. The objectives and its past success demonstrate the Community's will to deal collectively with its energy problems and to help other countries, particularly in the Third World, by reducing its own demand on the world energy market. It will have demonstrated to other countries that they too can improve their situation through effective energy policies.

IV. THE CASE FOR ADOPTING NEW OBJECTIVES

19. The present Community objectives for 1990 were fixed five years ago and, as already outlined, seem likely to be achieved. But 1990 is not far away and these objectives can now only have a limited influence on energy policies in the remainder of this decade. Decisions taken in the next few years will therefore determine the Community's energy situation in the 1990s rather than in this decade. It is thus essential to set new longer-term objectives to provide a context for policy makers, energy producers and consumers. In a Resolution in March 1983¹⁴ the European Parliament endorsed this view by inviting the Commission to update the 1990 objectives.
20. In addition, the energy picture has fundamentally changed since the 1990 objectives were set. The more relaxed market situation has eased some of the pressures. But there are also dangers inherent in this change. Temporary surpluses, whether of oil, gas, coal, electricity or uranium, and downward pressure on prices are short-term signals which could delay or undermine the decisions necessary to assure long-term needs. The effect of the weak market situation on the

¹⁴ European Parliament Resolution of 11 March 1983 (ref Official Journal C96 of 11 April 1983).

financial position of the energy industries could hinder investment. More generally, there will always be a risk of complacency and policy delays in this type of situation.

21. This is illustrated by the **Energy 2000 study**. Long-term assessments will always involve a degree of uncertainty and it is not the Commission's view that the Reference Scenario in the study should be used as a quantitative plan. But the situation at the end of the century which it suggests, would represent a broadly **satisfactory result** in terms of external reliance and control of energy demand. The analysis of variant scenarios in the study does, however, show that there are risks of a worse outcome in terms of energy dependence, for instance if energy efficiency does not improve as expected, if oil prices fall considerably or if there are setbacks to nuclear energy and solid fuels. Other parameters could also change the situation.
22. Further progress will not therefore come about automatically. It will require positive commitment to avoid these risks and to ensure that the decisions necessary to bring about this outcome are in fact taken, and taken on time. The adoption of new longer-term objectives will underline and endorse this need.
23. As to the **time horizon** for such objectives, a balance clearly has to be struck between the shorter and longer lead times required to carry through different types of policy and investment decisions. The Commission's analysis does however suggest that it is the energy situation in 1995 and beyond which will be vitally determined by the decisions taken or not taken in the next few years. As in the previous objectives exercises, therefore, a ten-year timescale would seem to be a useful horizon for most sectors, although likely trends beyond that time will have to be taken into account. The Commission is therefore associating with this Communication a draft Council Resolution defining **Community energy objectives for the year 1995**.

24. The merits of adopting either a **quantitative** or a **qualitative** approach will depend on the field in which the objective lies. In some areas, quantitative expression will either be impossible or unnecessary. In other areas, however, the need for a definitive policy direction and for a yardstick against which to measure the Community's progress will be best expressed in quantitative terms. The Commission's proposals are therefore a mixture of these two approaches.
25. In formulating the proposed new objectives for the Community, account has been taken of the fact that the Member States differ considerably with regard to economic and industrial structures, geography, energy reserves and political and administrative conditions. As in the past, the Commission will take into account these differences in its monitoring of national energy policies against the background of the new objectives. It will be essential to ensure that the burdens borne by the Member States in contributing to the realisation of the new objectives are comparable and that equivalent efforts are made in each country.

V. THE PROPOSED OBJECTIVES

i) Horizontal Energy Objectives

26. The Community's overall energy policy must in the first instance be guided by certain **horizontal** objectives common to all the energy sectors.

27. **External Relations**

The dependence of the Community on international energy markets, in particular the oil market, will continue. The position of the Community and its member countries will be strengthened if a coordinated approach is followed so that the full influence of the Community can be felt. The aim therefore must be to maintain

Community cohesion in external energy relations, whether with other industrialised countries, with the oil producers, or with oil-importing developing countries.

28. Despite the present market situation, the importance of the Gulf region as the world's leading oil supplier will persist because of the major reserves in that area. It is therefore right that the Community should continue with its policy of establishing good relations with countries and inter-governmental bodies in this region. Both the Community and the oil exporting countries recognise the need to ensure continuity and stability in the world market. Contacts with the Gulf Co-operation Council, with a view to reaching a wider economic co-operation agreement, will be particularly important in this context. The long-standing relations with OAPEC should be further strengthened, and arrangements for exchanging information with OPEC should be established.
29. The fact that imports of coal and gas from third countries are likely to increase will also need to be taken into account in the Community's relations with the countries concerned. The importance of the Community as the major world user of nuclear energy has grown in recent years. This should be fully exploited in the conduct of relations with key suppliers of uranium and other nuclear fuel materials.
30. The Community's external energy relations should not however be confined to those countries which supply the Community with energy materials. One of the main features of the world energy market is the degree of interdependence and common interest in maintaining satisfactory market conditions. The Community should develop further its co-operation with developing countries and regions in the energy planning field. Relations with other industrialised countries should continue to be pursued, both bilaterally and in the IEA/OECD and other international fora.

<p><u>Objective:</u> Development of external energy relations through a co-ordinated Community approach.</p>

31. Internal Energy Market

Although Community energy policy has always laid stress on co-ordinated action and common objectives, it is arguable that not enough attention has been paid in the past to the advantages which would result from a more integrated common market in energy. In the case of refined oil products, there is already an open market policy in most Member States which has benefitted consumers through increased competition and substantial intra-Community trade. In the coal sector, however, the level of trade between Member States is limited. That situation is likely to persist as long as production costs in the Community's own coal mining industries remain above the price level of coal imported from overseas.

32. There is clearly scope for greater trade between Member States in the gas and electricity sectors. Some interconnections between national systems already exist but, except in the case of gas exports from the Netherlands, they do not at present provide the capacity for substantial net trade. In general, gas and electricity distribution systems have been designed in a national context.

33. The existing trade in electricity between Member States is largely conducted as a balancing activity, with exports more or less balancing imports over time. There are signs that this is changing, but most Community countries still seem reluctant to rely to any significant extent on electricity supplies from outside their own borders. Presumably this reflects a lack of confidence about supply security but, given the level of interdependence which is accepted in other fields, it is difficult to see why this should be the case.

34. In the case of gas, there are, as stated above, sizeable net exports from the Netherlands to other Member States, but (as for electricity) this trade only takes place between the national utilities in the countries concerned and does not enhance competition at the level of the final consumer. The other major Community gas producer, the United Kingdom, has not so far exported gas to other countries. There are at present no gas pipeline interconnections between the United Kingdom and other Member States.
35. For both gas and electricity, there is no doubt that greater interconnection of systems, and increased trade, would benefit all concerned. It seems self-evident that a wider Community system, and greater competition, would improve efficiency and reduce overall costs. In addition, a larger degree of interconnection would enhance security by making it possible to share supplies in emergency situations. The new Community objectives should therefore recognise the need for greater integration of the internal energy market.

	Objective: Greater integration of the Community energy market
	to improve supply security, reduce overall costs and
	enhance economic efficiency through increased
	competition.

36. Energy Security

The best way to improve energy security in the long term will be an effective energy policy. Indigenous energy production will of course be a key factor. But security will also be enhanced through **diversification** of energy supply sources, **greater system flexibility** and **contingency measures**.

37. Since the Community's energy import dependence is likely to increase during the rest of this century, the policy of **diversification** will need to be developed further to achieve a satisfactory regional balance of supply sources. This will be particularly important in the hydrocarbons sector, where total imports are likely to grow significantly. A specific oil import objective is suggested below. For oil, the rôle of Middle East countries in supplying the Community's needs will inevitably remain strong but will continue to be offset to some extent by oil from European sources, including Norway. For natural gas, the level of diversification in and well beyond 1995 will depend considerably on purchasing decisions made in the next few years. No major gas security problems should arise if Member States and utilities bear in mind the need to avoid undue dependence on any one source of gas imports, particularly in the case of non-OECD sources. There is already a diversified pattern of coal imports, which seems likely to be maintained even if the emphasis on particular sources changes in coming years. The level of external dependence on coal and gas will not of course be as high as that for oil.
38. The Community is also substantially dependent on the outside world for uranium supplies, although stock levels are high. Security of supply will need to be underwritten by long-term contracts, and the case for encouraging more uranium exploration in the Community should be kept under review. The introduction of fast breeder reactors will enhance security by making better use of the raw material.
39. As explained above, one factor in improving **flexibility** and security within the Community will be greater interconnection of national gas and electricity transport systems. The more widespread introduction of dual- or multi-fired capacity in industry would also give consumers greater flexibility, both to take advantage of changes in relative fuel prices and to counter supply disruptions by fuel switching. The maintenance of an adequate capacity margin and a diversified fuel mix in the electricity sector will always be important. In the gas sector, flexibility will also be improved by the wider use of interruptible contracts.

40. **Contingency measures.** Stocks policy and the EC and IEA oil sharing schemes provide the present framework in the oil sector. These will need to be kept up to date, and, if necessary, improved and adapted to take account of the changing market situation and the nature of possible supply risks. In the gas sector, discussion at Community level of security measures and joint crisis management should continue. Coal stocks will of course also need to be sufficient to ensure supply security.

<p><u>Objective:</u> Reduction of security risks through indigenous energy production, diversification of supply sources, greater system flexibility and effective contingency measures.</p>

41. **Energy Pricing**

Realistic energy pricing policies are an essential basis for an efficient energy supply system. This is crucial for the competitiveness of the Community's industries, for the operation of the common market and for the Community's international trade. In terms of energy policy, realistic prices will avoid wasteful consumption and provide the right incentives for development of the Community's energy reserves. Such a policy will also ensure effective competition between the different fuels and give consumers the correct signals to guide their investments and choice of fuels.

42. Last year the Commission issued a report on the application of the Community's energy pricing principles in Member States¹⁵, which set out the principles of energy pricing and their practical application. This report concentrated on the gas and electricity sectors, which are characterised by certain types of problem inherent in the existence of sectoral supply monopolies and have been particularly sub-

¹⁵ COM(84)490 final.

ject to government intervention. A report on pricing in the downstream oil market is now being prepared. The problem of prices for Community coal is inextricably linked at present with the question of State aids for the coal industry, on which a separate Communication is about to be released. The price of imported coal will however continue to be set by competition in the world market.

43. The Commission reaffirms its view that realistic energy pricing in all sectors must remain one of the foremost Community objectives for 1995, and is essential to the achievement of the goals described in this Communication. In the case of Community coal, however, it has to be recognised that achievement of the objective set out below may not be feasible within the next ten years.

<p><u>Objective:</u> Application of the Community's energy pricing principles in all sectors of consumption.</p>

44. **Environment**

The Community's third action programme on the environment¹⁶ stresses that the environmental dimension should be integrated in other policy sectors. This integration is especially important in the energy field.

45. There is a close link between energy and environment decisions. Just as energy production and use can have a negative effect on the environment, environmental measures will increase the costs of energy supply and affect competition between fuels. Policies in both areas must from the beginning take account of this interaction. To find a proper balance, it will always be essential to make a full assessment of the available information on benefits and costs, taking account of

¹⁶ Official Journal C46/1 of 17 February 1983.

the fact that emission standards will in turn stimulate technological innovation in this field. It will also be important to create a stable legislative climate in the environmental field as a framework for decisions on investment and fuel choice. The energy policy objectives put forward in this paper are in the Commission's view consistent with environmental aims, **provided that** the best and most cost-effective technologies which are available are used to reduce the environmental risks associated with nuclear energy and fossil fuels to an acceptable level.

46. Some energy policy aims are clearly favourable in environmental terms. For instance, energy conservation, the increased use of natural gas and the further development of safe nuclear production will all make a substantial contribution to reducing emissions of pollutants, thus furthering the Community's objectives in both the energy and environmental fields.
47. Recommendations on long-term energy objectives should therefore include the environmental dimension. The key point is that policies should take account of the need for a balanced approach which furthers both environmental and energy aims, particularly through the development and use of new control technologies and through the more efficient use of energy.

	<u>Objective:</u> The balanced pursuit of both energy and environmental
	aims, particularly through the use of the best avail-
	able and cost-effective control technologies and
	through improvements in energy efficiency.

48. Regional Development

The Commission has for many years followed the principle that the regional dimension should be taken into account in all the main areas of Community policy. The European Parliament has recently underlined the importance of this in a Resolution on 16 April 1985.

49. There are important interactions between energy and regional policy:

- i) the pursuit of energy objectives, to the extent that this involves investments in regions which are less developed or suffering from industrial decline, will contribute to the restructuring of regional economies and create new employment;
- ii) changes in the energy situation, for instance where Community energy production is declining, may in some cases increase regional employment and structural problems, particularly in the older industrial areas.

50. Community regional policy and the use of the Regional Fund can play an important rôle in improving the energy situation in less favoured regions. The Commission now intends to reinforce the efforts which have already been made in the past by:

- introducing a new Community programme designed to encourage the type of energy developments which would have a significant local impact in less favoured regions;
- the development of reconversion activities in regions particularly affected by the structural changes in the Community's energy industries.

51. To reinforce these efforts the Commission will develop an appreciation of the regional consequences of the orientations and actions of energy policy. It will also continue to finance energy studies at the regional level. The purpose will be to identify initiatives which can be taken to save energy or exploit indigenous energy resources. Experience has shown that assessments at the local

or regional level can often identify opportunities, particularly in the energy saving and renewable energy fields, which may not be apparent at national level.

<p><u>Objective:</u> Reinforcement of Community energy policy through appropriate measures in less favoured regions.</p>

52. Technological Innovation

This will be an important factor in the continued restructuring of the Community's energy economy and in its future competitiveness. New technologies will contribute to the efficiency of energy production, transformation, transportation and use, to the development of renewable sources and to environmental control.

53. For instance, with the easier gains having been largely realised, greater energy efficiency in industry, public services and households will in future depend considerably on the development of advanced and cost-effective technologies. Coal burning is already viable for a number of industries, but efforts must be made to develop technologies which can cope with tighter environmental standards and offer economic advantages, for instance fluidised bed combustion, the use of coal-water mixtures, development of low-NO_x burners and flue gas cleaning. The large-scale application of coal gasification and liquefaction in Europe will also require improvements in the economics of these technologies. In the field of renewable energy resources, the development, demonstration and use of new technologies will be needed. The technology for locating and developing the Community's hydrocarbon reserves, particularly in deep water, is another key area. All these fields are included in the Community's energy R&D, demonstration and hydrocarbon technology programmes.

54. Nuclear energy in the Community has become more or less a conventional technology but, if the Community is to keep its leading position in this field, technologies need to be improved to make better use of the uranium raw material (fast breeder reactors). Work on the long-term option of nuclear fusion should clearly continue.
55. The promotion of these and other technologies will require financial commitments and sustained policies. The Council has recently approved the Third Community R&D Programme, for non-nuclear energy, and is now considering extension of the demonstration projects and hydrocarbon technology programmes. The Community and its Member States must continue to encourage innovations and devote the necessary resources to RD&D programmes.

<p><u>Objective:</u> Continued promotion of innovative energy technologies through research, development and demonstration.</p>
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ii) Sectoral Objectives

56. **Efficient Use of Energy**

The intensity of final energy demand was reduced by 20% in the Community between 1973 and 1983. Both the Commission Communication concerning the Member States' energy saving programmes¹⁷ and the results of the Energy 2000 study show that there is still considerable potential for further energy savings. This will be by far the most important factor influencing future energy consumption and must clearly be reflected in the new objectives for 1995. Energy efficiency measures will also create new jobs and industrial activity, and support environmental aims.

¹⁷ COM(84)36 final.

57. For the period until 1990, the Community had adopted the objective of reducing the ratio between energy demand growth and GDP growth to a factor of 0.7. It has already been argued on several occasions¹⁸, that this indicator is inadequate. In its last review of Member States' energy programmes¹⁹ the Commission used two alternative measures for analysing trends in efficiency: the ratio between GDP and **primary** energy demand (the energy ratio) and that between GDP and **final** energy demand (energy intensity). The Commission recognises that neither of these measures provides a perfect basis for analysis of increased efficiency since both can be influenced by changes in the structure of GDP. The unambiguous measurement of efficiency trends requires disaggregation at the level of the different economic and industrial sectors. For its future reviews of progress towards 1995 energy objectives, the Commission is considering how to develop a set of disaggregated indicators.
58. But in formulating political objectives at Community level, a simpler approach would seem desirable. The Commission therefore proposes that the Community should set itself one clear overall goal in this sector. This should be related to the intensity of final energy demand, since the relationship between GDP and primary energy demand can be distorted by the rate of electricity penetration and the structure of electricity supply. For the reasons given below, the Energy 2000 study indicates that an improvement of 25% in energy intensity is feasible by the year 2000 (relative to 1983) and that there is indeed scope for doing better. The Community should exploit this scope by aiming to achieve the 25% improvement by the mid-1990s.
59. If this objective is to be achieved, it will be necessary to take effective measures in all consuming sectors ie: buildings, transport, commerce and industry. Member States will need to intensify their actions on the basis of the guidelines and measures recommended by the Council in June 1980²⁰ and January 1985²¹ and according to the

¹⁸ For example COM(82)326 final.

¹⁹ COM(84)87 and 88 final.

²⁰ Official Journal C149 of 18 June 1980.

Resolution of March 1985²². Regional energy studies will help to identify savings potential at the local level. The following paragraphs give an overview of the measures which could be applied in each sector.

60. The buildings and tertiary sector at present accounts for some 38% of final energy consumption. The Commission, in its Communication on rational energy use in buildings²³, has already illustrated the great potential for energy saving in this area (around 30%) and the measures which could be taken. Consumers in this sector can be influenced to use energy more rationally with the aid of the whole package of measures described also in the guidelines of January 1985²¹.
61. In the industrial sector, conventional technologies for energy saving are already being widely applied, but there is still much scope for fully economic improvements. Further savings will rest on better energy management, auditing programmes and the development and introduction of new technologies. Measures to encourage energy saving investments, such as risk guarantees, merit careful examination. Information and consultation programmes should be continued, and the establishment of energy saving associations and the appointment of energy managers should be further encouraged.
62. The transport sector, which is almost entirely dependent on oil, is in fact the only sector in which energy consumption has risen in the past ten years. Although the specific energy performance of vehicles has already improved, there is scope for further progress through up-dating voluntary agreements with the automotive industry. But industry must know well in advance what emission standards and fuel quality requirements will apply. There is also potential for achieving further savings through wider use of diesel engines, new engine technologies, influencing driver behaviour, greater use of

21 Official Journal C20 of 22 January 1985.

22 Official Journal C78 of 26 March 1985.

23 COM(84)614 final.

public transport and other measures. Improved traffic management and a better traffic infrastructure will also increase energy efficiency in this area.

<p><u>Objective:</u> Further improvement of energy efficiency in all sectors to achieve at least a 25% reduction in the overall intensity of final energy demand by 1995.</p>
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63. Oil Import Dependence

The share of oil in gross primary energy consumption (including bunkers) in the Community was successfully reduced from 62% in 1973 to 48% in 1983. In absolute figures, this was equivalent to a saving of over 160 million tons. During the same period annual domestic crude oil production increased more than tenfold to over 130 million tons. Net oil imports therefore fell to 32% of total energy demand.

64. The results of the review of Member States' energy policies and of the Energy 2000 study have shown that the Community is more or less on target for meeting the objective for 1990, which was to reduce the share of oil to about 40% of gross primary energy consumption. Oil's share might even fall slightly below this figure by 2000. But even then oil will remain the Community's most important single energy source, and will still be subject to price and supply risks. It is therefore necessary that, wherever economically feasible, oil substitution should continue. Energy savings in the transport sector and the displacement of oil from power stations will be particularly important in this sense, and are covered by other objectives in this paper.

65. Although the 1990 objective was defined by the share of oil in total consumption, it seems more logical that the relevant objective for 1995 should be addressed to reliance on **imported** oil. The security risk arises of course not from the use of oil itself but from the degree of reliance on oil which cannot be supplied from the Community's own resources. Unfortunately, the likelihood, on present estimates, of some fall in Community oil production in the second half of the 1980s suggests that oil imports will tend to rise in absolute (although not in percentage) terms. In 1995 net imports of oil could amount to about 30% of total primary energy consumption whereas gas and solid fuel imports together could represent only about 15%. Weakening oil prices could however increase oil import dependence further in that timescale.
66. It is suggested therefore that, as well as diversifying supply sources, the Community should seek to ensure that the share of net oil imports in its total energy needs does not exceed one third²⁴. This will require effective policies to ensure that oil substitution and energy savings continue. Member States will also be concerned to maintain legal and tax frameworks which provide the right balance of incentives for oil exploration and development. The Commission will also examine with Member States whether there is any action at Community level which could help to promote oil exploration in new areas.

²⁴ This objective is expressed in terms of the share of oil imports in total Community energy consumption, including bunkers. Bunker trade is an important economic activity and a source of earnings for the Community, which should therefore be taken into account in assessing the level of external oil dependence. But since there is in general no substitute for oil in this sector, an increase in oil use in any Member State, brought about by increased bunker sales, should not be a cause for concern. This will be allowed for in the Commission's monitoring activities.

67. The proposed oil import objective for 1995 is of course put forward in the context of the continuing uncertainty about future world oil supplies and prices. The need for such an objective could become less strong if, in consultation with the oil exporting countries, ways are eventually found of ensuring greater market stability and continuity.

<p><u>Objective:</u> To maintain net oil imports at less than one-third of total energy consumption in 1995 by continued oil substitution and by promotion of exploration and production within the Community.</p>

68. **Natural Gas**

The consumption of natural gas in the Community increased by more than 40% to 165 million toe between 1973 and 1983, accounting at the end of this period for about 18% of primary energy consumption. This has helped to diversify the Community's energy sources and has also served to reduce environmental problems as far as sulphur dioxide emissions are concerned.

69. The use of natural gas in the Community is likely to rise further in the rest of the century. Because of its advantages for consumers, for environmental quality and for overall diversification of the Community's supplies, this potential trend should clearly be supported, provided that satisfactory security of supply is maintained (see para 39 above). In view of the efficiency disadvantages compared with other uses for gas, the expected displacement of gas from power stations should under present conditions continue. But the aim should be to compensate for this by increased use in other sectors.

70. Indigenous production of natural gas could decline in the next ten years, although it is possible that estimates of the Community's gas production potential may prove to be pessimistic. An optimum framework for gas exploration and production will of course be necessary in the same way as for oil. Investigations of deep gas potential in the Community should continue.
71. In 1983, some 30% of the Community's gas requirements were met by imports. This is at present no cause for concern. The Commission's analysis in 1984²⁵ concluded that the Community's security of gas supply was adequate and that in 1990 the gas industry could cope with an interruption of 25% of total supplies for a period of six months. In paragraph 39 above, attention has been drawn to the importance of future purchasing decisions for the long-term security of gas supplies and to the need to avoid undue reliance on any single source.
72. Against this background, the Commission proposes that the Community should aim to maintain and, if possible increase, the market share of natural gas in primary energy consumption by 1995. This will depend critically on relative gas prices in the various end-use markets. Competition between fuels is likely to be strong in coming years. Price developments in favour of natural gas appear possible, particularly if gas prices could be de-coupled from those of oil. When negotiating or re-negotiating gas supply contracts, the importing companies should be encouraged to take advantage of the increasing competition between third country suppliers to move in this direction.

<p><u>Objective:</u> To maintain and if possible increase the market share of natural gas on the basis of a secure and diversified pattern of supplies.</p>
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²⁵ COM(84)120 final.

73. Solid Fuels

Consumption of solid fuels in the Community fell slightly between 1973 and 1983. Coal production fell by about 16% and coal imports doubled to account for 20% of coal consumption. The Energy 2000 study shows that there is potential for increasing the consumption of solid fuels in the rest of this century. The wider use of coal, and of lignite and peat in certain countries, would benefit the Community's energy strategy in terms of diversification and restraint of oil imports. In addition to the role of Community production, freedom of access for imported coal will be important in this context. Following an earlier IEA Commitment to promote free trade in coal, Member States and other industrialised countries undertook in the May 1983 OECD Ministerial meeting to remove impediments to energy trade.

74. There are, however, a number of factors which could hold back increased use of coal and other solid fuels unless sustained efforts are made. For instance, the restructuring of the economy towards lighter industries and services will not favour an increase in coal consumption, although this could be offset by use of the latest, more efficient coal utilisation technologies. The use of solid fuels as a source of heat will also be of special importance. In this sector, the scope for district heating by using coal-based combined heat and power systems will need to be exploited where this is economically feasible.

75. Solid fuels should make further inroads into the electricity generation market, which is by far their largest single outlet (see paragraphs 77-78 below). But the level of use in this sector will depend greatly on future growth rates in electricity demand. Slower growth than assumed in the Energy 2000 study (+2.2% per annum) would have a highly disadvantageous effect on the level of solid fuels consumption. The Energy 2000 study also suggests that the costs attached to complying with 'acid rain' emission controls could reduce the market share for solid fuels in favour of gas and nuclear power. This risk will be alleviated if lower-cost technologies for reducing sulphur and nitrogen oxide emissions are developed and if a stable legislative climate is ensured.

76. The extent of the increase in consumption of solid fuels which can be achieved in the next ten years is therefore uncertain. A reasonably ambitious Community objective for 1995 would therefore be to maintain and if possible increase the present share of solid fuels in primary energy consumption. This will require sustained policies to encourage coal use.
77. This would still represent an important contribution to the Community's energy needs. It would clearly be advantageous, in terms of security, employment and the balance of trade, if a major part of that contribution could be supplied from the Community's own resources on a more economic basis. But that will only be assured if the Community's solid fuel production industries can be made more competitive by means of restructuring. This question will be discussed further in a new Commission Communication on State aids in the coal sector.

<p><u>Objectives:</u> To maintain and if possible increase the present market share for solid fuels. Continued restructuring of the Community's solid fuels production industries.</p>

78. Electricity Generation

The 25% increase in electricity demand between 1973 and 1983 was met in particular by growing use of solid fuels (+32%) and the more than fourfold increase in nuclear production. The use of oil products in electricity generation has been roughly halved since 1973, in line with Community energy strategy.

79. Electricity demand will probably continue to increase at a higher rate than total energy consumption, although the rate of increase will depend on the degree of electricity penetration, particularly in

the industry and household sectors. This subject is of vital importance for the future of solid fuels and nuclear power and will be analysed further in a new Commission review of the electricity sector later this year.

80. Electricity demand increases will have to be met mainly by the expansion of solid fuels and nuclear generating capacity, given the lack of further hydropower potential and the need to displace oil and gas. Solid fuels will play a key rôle in the electricity sector and should make further inroads into this market. Taking coal, lignite and peat together, the consumption of solid fuels in this sector could increase by 40 million tons of coal equivalent by 1995. This would mean that solid fuels then accounted for about 40% of electricity output.
81. Nuclear energy is likely to cover over half the increase in total energy consumption in the Community in the remainder of this century. In July 1982, the Energy Council underlined the economic advantages of nuclear power²⁶. The Nuclear Indicative Programme, issued by the Commission last year, suggested that about 40% of electricity might be generated from nuclear power in the year 1995. This would clearly be a desirable outcome in terms of both energy costs and security, although the contributions of Member States to this aim will vary a great deal according to the political context and their electricity needs. If the share of nuclear energy is to reach this level in 1995, the necessary decisions to ensure that additional nuclear capacity is brought into service between 1991 and 1995 will need to be made in the next 2 years or so. Continued attention will be paid to all the safety aspects of nuclear energy and it will be important to make this widely known to alleviate public concern.
82. The 1990 objective was that solid fuels and nuclear power together should account for at least 70-75% of the energy used to generate electricity. This target was reached in 1983. Taking account of other sources for electricity generation, such as hydropower and

²⁶ Conclusions of Energy Council on 13 July 1982 -

geothermal, and of the essential policy aims, it would seem advisable to use a different approach for 1995, giving prominence to the displacement of oil and gas in this sector. The method will of course be continued priority for the use of both solid fuels and nuclear power. There will continue to be some requirement for hydrocarbon use on operational grounds, and it will take time to change the present structure of generating capacity. But there is clearly still major scope for displacing oil and also for allocating gas supplies to more efficient and economic uses. Based on its analysis of the situation, the Commission proposes that an objective for 1995 should be to reduce the share of electricity generated from oil or gas from about 22% now to at most 10%.

<p><u>Objectives:</u> Continued priority for the use of solid fuels and nuclear energy in the electricity sector to ensure that not more than 10% of electricity is generated from hydrocarbons in 1995.</p> <p>Approximately 40% of electricity output in 1995 to be generated from nuclear power.</p>
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83. New and Renewable Energies

The outlook for new and renewable energies will be influenced both by the development and commercialisation of technologies and by energy market developments (and especially energy prices). The present relaxed energy market situation carries the risk that they may be given less attention and that R, D & D efforts will slow down. And yet their potential is significant. Progress must be sustained and if possible accelerated through the continuity of action provided by multi-annual programmes.

84. New and renewable energies both diversify and add to Community energy production, thereby reducing external energy dependence. They provide one means of helping to integrate the local and regional dimension into national and Community energy policy, since their scale of operation makes many of them particularly suitable for introduction and management at local or regional level. Their environmental effects are largely positive. And finally, new technologies for the production, transport and use of these energies are often particularly suitable for the needs of developing countries, both helping the countries themselves and increasing the Community's export capability.
85. New and renewable energies are normally taken to include mini-hydro, biomass (including waste), solar (active and passive), geothermal and wind energy, as well as conventional large-scale hydro. All these energy sources are included in the objective for this sector proposed below. There is however, an important distinction to be drawn as regards future development between, on the one hand, large-scale hydro (where the potential has been largely exploited already) and, on the other, the other alternative energy sources, on which development and demonstration efforts must continue to be concentrated.
86. A second point of practical importance is that the real contribution of many of these new alternative sources as substitutes for conventional fuels will tend to be under-valued by conventional statistical treatment. This is because only those alternative sources of energy which are used for electricity production (high-enthalpy geothermal, wind, mini-hydro, wave energy, and photovoltaics) will be included in commercial energy statistics, whereas heat produced from waste or passive solar heating in particular seem likely to remain largely non-commercial energies. The Commission will be examining further how to deal with the statistical problem in the monitoring of progress in this sector. But it is important to stress that the actual and future contribution of new and renewables will be greater in terms of the real substitution for other fuels than may be evident

from an examination of existing energy balances (whether of primary or final energy) such as those used hitherto for the review of national programmes or for the Energy 2000 study.

87. Estimates of the potential for new and renewable energies have been made for the Commission already in the evaluation report on the Community's demonstration programmes²⁷ as well as in separate ad-hoc studies. Conventional hydro is likely to continue to contribute around 12 mtoe a year to the Community's energy balance over the period to 2000. Estimates of the potential involved for the other alternative sources in 2000 vary, but suggest that they could substitute for between 30 and 40 mtoe a year of conventional fuels by the end of the century if rapid progress is made in technological development and if the economic conditions are right. Altogether therefore, new and renewables could provide the equivalent of 40 to 50 mtoe in 2000, although for the reasons discussed above not all of this contribution would show up in the Community's energy balances. Such a contribution would compare with an estimated "real" contribution equivalent to around 15 mtoe in 1985. Against that background it would seem reasonable to aim for a substantial increase in the contribution of new and renewables by the end of the century, with the prospect of a tripling in the amount of conventional fuels which they displace.
88. The potential development of new and renewable energies will be examined in more detail in a separate Communication from the Commission to the Council later this year. It is already clear, however, that the potential estimated above will remain largely unexploited unless efforts are sustained and if possible increased both at national and at Community level both in research and in the demonstration of ways of harnessing these energy sources. In the case of demonstration, in addition to innovation itself, efforts must be focussed more than ever on the dissemination of results and positive encouragement to the reproduction of projects which have already achieved encouraging results.

²⁷ COM(85)29 final/2.

<p><u>Objective:</u> To increase the efforts already underway to develop and commercialise new and renewable energies with a view to tripling their displacement of conventional fuels by the end of the century, enabling them thereby to make a significant contribution to the Community's energy requirements.</p>

iii) Effect of Enlargement

89. The new 1995 objectives would of course apply to the Community of Twelve. The Commission will be discussing with the Spanish and Portuguese authorities the implications for those countries. The enlarged Community is likely, on present trends, to have about the same percentage reliance on oil in 1995 as the Community of Ten, slightly lower reliance on gas and nuclear energy, and a slightly higher share for solid fuels and renewables. On present estimates, therefore, it appears that there will be no need to modify the above proposals to take account of enlargement.

VI. CONCLUSIONS

90. The development of the Community's energy market since the first oil crisis has shown that strong energy policies bring clear rewards. The Community is likely to meet its energy objectives for 1990, if no major disruptions occur on the world energy market. New objectives for 1995 are now needed to ensure that restructuring continues and to achieve the type of secure and efficient energy economy which is needed to support the future development of the Community and its economic and social goals.

91. The objectives proposed in this Communication are designed to achieve a satisfactory energy situation in the Community in 1995 and the remainder of this century. They underline both horizontal and sectoral needs. On the horizontal level, their adoption will reinforce the priority which must be given to realistic energy pricing, new technologies, the internal energy market, security and external relations.
92. On the sectoral level, the intentions underlying the proposed objectives are that the rate of energy demand growth should be controlled; that the pattern of energy supplies should be further diversified by increased use of natural gas and solid fuels, as well as by exploitation of the Community's own energy reserves; and that nuclear energy and solid fuels should further displace hydrocarbons in the electricity sector. New and renewable energies should also gradually increase their contribution to the Community's needs.
93. Adoption of the new 1995 energy objectives would provide a valuable framework for the pursuit of coherent national energy policies. They would also provide the basis for continued monitoring of progress by the Commission to ensure consistency and comparability of national efforts. The Council is therefore invited to adopt the draft Resolution in Annex I of this Communication.

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Draft Council Resolution
concerning new Community energy policy objectives for 1995
and convergence of the policies of the Member States

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having taken note of the communication of 13 December 1984 from the Commission on "Member States' energy policies: main issues for the future"¹ and the work carried out by Commission departments on "Energy 2000";²

Having taken note of the communication of 22 November 1984 from the Commission on the Illustrative Nuclear Programme for the Community;³

Having taken note of the opinion of the European Parliament;

Having taken note of the opinion of the Economic and Social Committee;

Having taken note of the opinion of the ECSC Consultative Committee;

Having regard⁵ to its earlier resolutions of 17 December 1974 and 9 June 1980;⁴

Having regard to its declaration of November 1983 on "the rôle of energy policy within the Community";

Whereas the adequate and secure availability of energy on a satisfactory economic basis remains a prerequisite for the pursuit of the economic and social objectives of the Community and of the Member States;

Whereas it is essential that the substantial progress made so far to restructure the energy economy be maintained and, if necessary, reinforced within the Community;

Whereas in order to achieve this goal priority should be given, on the demand side, to containing energy consumption to a greater extent and to restricting oil's share in total energy consumption and, on the supply side, to ensuring that the level of dependence on imported energy, and in particular imported oil, is not unreasonable;

Whereas experience has shown that the framework established by Community objectives is of considerable value as regards the co-ordination and harmonisation of national energy policies;

¹ COM(84)693.

² SEC(85)324.

³ COM(84)653.

⁴ Official Journal No C153 of 9 July 1975.

⁵ Official Journal No C149 of 18 June 1980.

Whereas such objectives clearly demonstrate to consumers, producers and investors in the Member States and in other countries that the Community and its Member States are determined to improve their energy supply conditions;

Having regard to the Member States' rôle, in the energy policy context, enabling market forces to operate;

Whereas in order to give practical expression to the concept of Community solidarity each Member State must make an effort which is consistent with its own particular possibilities and constraints but which is of equivalent intensity to that of its partners within the Community;

Whereas the political commitment with regard to the Community objectives entails effective monitoring of national policies and the adoption of appropriate measures at Community level and at national level to ensure that they are attained;

Whereas it is necessary for the Community to have regular and appropriate information about the Member States' energy policies between now and 1995 in order, on the basis of detailed Commission reports, to be in a position to verify the convergence of these policies in relation to the Community objectives;

1. Is pleased with the results obtained over more than ten years in the Community as a whole and in the individual Member States as regards improving the energy situation, and points out that these results have been achieved both as a result of the effectiveness of the policies pursued and as a result of market forces.
2. Indicates that these efforts must be maintained and, if necessary, reinforced between now and 1995 and beyond that date in order to reduce to a minimum the risk of tension at a later date on the energy market and in particular on the oil market.
3. Emphasises that the aim of any energy policy is to enable consumers to have adequate and secure supplies of energy under satisfactory economic conditions.
4. Declares that such an energy policy is one of the prerequisites if the Community is to benefit from more competitive structures and greater economic growth.
5. Considers that the energy policy of the Community and of the Member States should be based on the following **horizontal objectives**:
 - (a) the development of **external relations** in the energy sector on the basis of a co-ordinated Community approach;
 - (b) greater integration of the **common market for energy** in order to improve security of supply, reduce costs and improve competitiveness as a result of greater competition;
 - (c) more **secure** supplies as a result of:
 - the development of the Community's energy resources under satisfactory economic conditions,
 - the geographical diversification of the sources of supply,

- appropriate flexibility of energy systems, and
 - effective crisis measures;
- (d) the application of Community principles for energy **pricing** in all consumption sectors;
- (e) a balanced search for satisfactory solutions as regards **energy and the environment** by making use of the best available and economically justified technologies and improving energy efficiency;
- (f) the continuous development of **technological innovations** through research, development and demonstration programmes;
- (g) the reinforcement of Community energy policy through appropriate measures in less favoured regions.
6. Assigns the following **sectoral objectives** for the energy policies of the Community and the Member States:
- (a) To achieve even **greater energy efficiency** in all sectors;
- For the Community as a whole, the objective is to improve the efficiency of final energy demand⁶ by one quarter by 1995;
- (b) To keep **oil imports** from non-Community countries to reasonable proportions by means of appropriate efforts to promote oil and natural gas exploration and production in the Community and by continuing with an oil-substitution policy;
- For the Community as a whole, the objective is to maintain net oil imports at less than one third of total energy consumption in the Community in 1995;
- (c) To maintain and, if possible, increase the share of **natural gas** in the energy balance on the basis of secure and diversified supplies;
- (d) To pursue and support efforts to facilitate consumption of **solid fuels** and to restructure the solid fuels producing industry in the Community;
- For the Community as a whole, the objective is to maintain and, if possible, increase the share of solid fuels in the energy balance;
- (e) To continue with the measures taken to reduce as much as possible the share of oil and natural gas in the production of **electricity**, in particular by giving priority to solid fuels and nuclear power;
- For the Community as a whole, the objective is to reduce the proportion of electricity generated from oil and natural gas to less than 10% and to raise the proportion of nuclear power to approximately 40% in 1995;

⁶ Ratio between final energy demand and gross national product.

- (f) To maintain the development of **new and renewable energy resources**, in particular by continuing with the effort made and placing greater emphasis on the dissemination of results and the replication of successful projects;

For the Community as a whole, the objective is to triple the output from new and renewable energy resources before the end of the century, enabling them thereby to make a significant contribution to the Community's energy requirements.

7. Requests the Commission to make recommendations and proposals with a view to increasing the convergence of the Member States' energy policies and ensuring that the above objectives are achieved.
8. Requests the Member States to base themselves on this resolution when framing their energy policies and, having regard to their own particular energy situation, to make **efforts of an equivalent intensity**, thereby strengthening the Community's energy policy.
9. Requests the Member States to submit to the Commission each year full information about their energy situation and forecasts and to inform if of any alteration or any significant change of direction in their energy policies.
10. Requests the Commission to submit, **every two years** or so, on its own responsibility and in the light of the above information, a **detailed examination** of the progress made in each Member State and in the Community as a whole towards achieving the above objectives.

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