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WHITE PAPER

**AN ENERGY POLICY
FOR THE EUROPEAN
UNION**

(Presented by the Commission)

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FOREWORD

1. The conditions under which energy products are produced, transported, distributed and consumed, whether they enter into industrial-production systems, the generation of electricity or in the organization of social systems, determine the economic, social and political environment of both business and the man in the street. Moreover, the regulatory framework determines the conditions under which investments are made in energy-producing and consuming companies.
2. Whatever the level of intervention by the public authorities, those politically responsible in the Member States are interested in, and indeed influence, the options as a function of national, regional or local priorities. These options are dictated by the aims of economic competitiveness and security of supplies which take account of both the social and regional dimension and of environmental-protection policy. This intervention by the public authorities may depend upon Community instruments, whether financial or trade-policy, or may affect the operation of the market and the conditions of competition which form the core of the Community's powers. This intervention must therefore, comply with Community obligations.
3. The Commission thus feels that it is essential for the effectiveness of the policies conducted at national level, that the responsibilities deriving from energy policy should form part of common aims that have been defined at Community level. The Commission is thus prepared to use all of the provisions of the Treaties to that end in order to establish, first of all, a framework for the discussion of energy policy that involves all of the public and private operators concerned, secondly, a framework for consultation on energy policy guidelines and on activities in this area and, finally, a framework for cooperation with the Member States in order to achieve jointly-defined aims.
4. It is indeed important that all Community instruments should be activated by common aims. The central aim of the Green Paper had been to usher in a broad debate on what those aims must be. That debate brought reactions from all of the Community institutions, the Member States, national parliaments and more than 40 national or Community bodies representing all of the economic, industrial and social interests concerned. The Green Paper allowed Parliament, in particular, to debate openly energy policy options and to define action guidelines which have contributed to this White Paper. In parallel and in consultation with the Member States, the energy industry and academic circles, the Commission has developed an analysis of the energy outlook up to the year 2020, together with scenarios. The results of those debates and studies will be published alongside this White Paper.
5. Energy policy must form part of the general aims of the Community's economic policy based on market integration, deregulation, limiting public intervention to what is strictly necessary in order to safeguard the public interest and welfare, sustainable development, consumer protection and economic and social cohesion. However, beyond those general

aims energy policy must pursue aims that reconcile competitiveness, security of supplies and protection of the environment while bearing in mind that the Union's central concerns are, on the one hand job creation and the quest for greater efficiency in the general business environment that also includes the organisation of energy systems, and on the other hand the protection of the environment.

6. In pursuing these aims the Community cannot be unaware that its forecast energy dependence will increase and that the choices to be made as regards protection of the environment in particular may heighten that dependence. Nor may it disregard the fact that the integration of the Community involves greater solidarity in the energy choices made by each of the Member States. Finally, it cannot ignore the fact that the energy scene is marked by changes in outlook and crises which justify flexibility and adaptation in defining and implementing an energy policy.
7. In considering these various constraints the approaches put forward in this White Paper are based on the following factors:
 - Market integration is the central, determining factor in the Community's energy policy. Without such integration other activities lose their justification since their essential aim is to use Community support instruments, such as the Trans-European Networks, in order to help in providing production, transport and distribution infrastructures enabling the European market to respond to demand, or to make supplies to that same market dependable. A fragmented market refers all such activities back to national level, and could undermine efforts to improve the Community's competitiveness. Against this background the White Paper must, during the current process of integrating the electricity and gas markets, address, in particular, the concerns expressed with regard to the contributions which the Community may make towards safeguarding public service obligations, towards economic and social cohesion and towards security of supply;
 - The concerns regarding competitiveness and environmental protection require a balanced approach in the medium or long term that is based on internalisation of costs. Irrespective of fiscal harmonisation which is necessary for the proper working of the internal market, the fiscal instrument is clearly an efficient method of internalising these costs that affect every level of production. However, that method is difficult to implement owing to the need to take account of its impact on industrial competitiveness and of its effects on the energy policy choices that currently differ within the Community. If the Commission is to continue to work on fiscal instruments by helping the Member States to restructure their own taxation policies with a view towards convergence while taking account of the aim of reducing taxation pressure on business; this must not undermine efforts to meet environmental challenges by taking into account energy efficiency at consumer-product level, by promoting in the generation of electricity cleaner and more efficient technologies, particularly renewable energies, by developing voluntary agreements between enterprises and by exchanges of experience and by cooperating on research and technological development and on demand-management projects;

- The external dimension is considered in general to be the most important vehicle for action, first of all because the Community's supplies mainly come from outside producers and, above all, because the growth of consumption in non-member countries will be the main cause for concern during the years ahead. Community funds, and the bilateral and multilateral agreements must be activated in order to provide a coherent approach to energy matters with our major partners. These fora for dialogue are already in place and must be used in order to implement that approach. It must, indeed, be borne in mind that the energy sector, in view of its strategic function, must aim at making investments secure, facilitating technology transfers and broadening consultation and cooperation;
- Security of supply must continue to be a constant concern of the public authorities; it also justifies a common approach at Community level in view of the level of integration of the consumer markets, of its external responsibilities and of the growing integration of the energy market itself. That approach must be based on bolstering the management of the oil crisis measures, by monitoring the operation of the energy market via more efficient use of existing tools and by an overall balance of fuels on the market, particularly for electricity generation and for transport, which takes account of the diversity of the national and regional situations.

8. This White Paper provides an indicative work programme for the Commission for the years ahead which takes account of the limits to Community action for reasons linked to either subsidiarity or to budgetary constraints. It does not go beyond the limits set out by the present Treaties and stays within the framework of the budgetary forecasts. It therefore does not involve any transfer of powers or any new budget spending. Implementation of that programme will pass through the Community's normal decision-making process via proposals and Communications or new management approaches towards existing machinery. However, since all action in the energy sector must adapt to changing conditions, on the basis of a common perception of the problems and their consequences, this work programme will be monitored and adjusted every two years as part of a report on energy which will enable the various institutions of the Community to provide an update on the aims pursued.

9. This White Paper provides a convincing case for a Community energy policy, but also identifies some limits to Community action in this area. The approach developed by the Commission in this White Paper in no way prejudices the action that it will be called upon to take in the framework of the Inter-governmental Conference which will be the subject of a report by the Commission in 1996 as foreseen in the declaration n°1 to the Treaty.

I. INTRODUCTION

1.1 Why a White Paper on Energy Policy?

10. Energy is a key sector in the European Community which is becoming increasingly integrated both politically and economically and whose geopolitical responsibilities are widening. Although the Treaties already provide for an important Community role in the energy field, the Commission has come to the conclusion, on the basis of past experience and in light of energy trends, that it is only within a sound and coherent energy policy framework at Community level, that maximum benefits can be realised from actions at both Community and Member State levels and a full contribution made to other policy objectives.
11. The need for such a framework is due to a number of forces that will have important consequences on the future of the Community's energy sector. First and foremost, as the Community moves towards an integrated and more competitive energy market, it will need to have increased solidarity on energy matters. It is at the Community level that an effective and balanced approach to energy policy issues can be achieved, such as the external energy role of the Community or the social and regional dimension of energy or the necessity to ensure that the Community's energy supplies remain affordable, stable and diverse.
12. Energy is of considerable importance given its strategic relevance as a raw material for industry, particularly energy intensive industries, for the quality of life and for the creation of jobs. In the current economic and social situation the level of energy prices is a positive factor in lowering production costs and prices and an important element in the process of economic convergence and progress towards economic and monetary union. However, the present favourable energy situation cannot always be taken for granted and a framework is necessary to ensure that its stabilising benefits are not lost. The energy situations and energy policies of Member States are quite different and it is likely that a sharp shift away from the present favourable energy situation would lead to different reactions. A Community energy policy framework in which Member States are working towards agreed common objectives would enable the Community to respond effectively to the destabilising effects of changes in energy prices.
13. The need for consistency is particularly acute for complex problems such as the relation between energy and environmental protection. On this issue there is a growing commitment at all levels - industry, governments, international organisations and general public - to sustainable development. This was an objective endorsed by the Community in its Fifth Environmental Action Programme - Towards Sustainability⁽¹⁾. Given the significance of energy in economic development, an important aim of a Community energy policy will be to ensure that measures in the energy sector do not conflict with and indeed enhance

(1) Com(92)93, Fifth Environmental Action Programme - "Towards Sustainability".

sustainable development. In general, the pursuit of competitiveness and environmental protection should be complementary and should not create any major tensions, as mapped out in the Commission's White Paper - "Growth, Competitiveness and Employment - The Challenges and Ways Forward into the 21st Century."⁽²⁾

14. The need for a consistent approach is also justified by the responsibilities exercised at national or regional level on energy and environment choices. In full respect of the subsidiarity principle, a cooperation process between the Community level and the national level should ensure that these responsibilities are carried out in a coherent way on the basis of common objectives. Last but not least, clear energy objectives agreed between the Community institutions would facilitate the use of existing instruments and thereby contribute to achieving these energy objectives.
15. Faced with these challenges the Commission, with the full support of the European Parliament and the Council, and in close consultation with interested parties in the energy sector, felt that there was a pressing need to relaunch the debate on the future shape of a Community Energy Policy and to present in a White Paper a strategy within a political framework for achieving it.

1.2 The Debate on the Green Paper

16. Energy policy guidelines based on the widest possible support have the best chance of succeeding. To this end, the Commission opened a broad debate in 1993 between all interested parties culminating in the adoption of a Green Paper⁽³⁾ by the Commission on January 11, 1995 that sets out the challenges of and possible solutions to the development of a Community energy policy framework.
17. The Green Paper has produced many different reactions. The Community institutions have delivered detailed comments on the Green Paper as well as opinions on what should be the major guidelines for a future Community Energy Policy and the role of the Community in this process. The Council⁽⁴⁾ is generally positive as regards the need to establish new energy policy guidelines. It wants a rapid completion of the internal energy market and takes the view that security of supply should be based on increased diversification and supply flexibility, rational use of energy in all sectors and research and technological development and that environmental policy and energy policy need to be considered in an integrated manner.

(2) Growth, Competitiveness and Employment - The challenges and Ways Forward into the 21st Century.

(3) COM(94) 659 Final 11 January 1995 - European Commission Green Paper - "For a European Union Energy Policy".

(4) Council Resolution n° 7802/95 of 13 June 1995.

18. The European Parliament⁽⁵⁾, while advocating the liberalisation of the energy markets also emphasised the need to guarantee security of supply, public services missions and environmental protection. It wants the Community to pursue a strong policy of diversification and sees the need to maintain a nuclear component. For environmental reasons, it wants the Community to define a programme with priority given to energy efficiency, energy savings and renewable energies and which could contribute to the fulfilment of the Community's international environmental commitments.
19. The Economic and Social Committee⁽⁶⁾ and the Committee of Regions⁽⁷⁾ focus on social and economic cohesion and policies that favour employment which must, in their view, be paramount in the development of a future energy policy. The major energy producing and consuming industries, a number of trade unions and some environmental associations have made substantial contributions to the debate and also provided, in many cases, detailed written comments⁽⁸⁾.
20. It would not be appropriate to summarise the complete debate on the Green Paper in this White Paper but it is worthwhile highlighting a few key points. Many contributors take the view that the Community energy dimension is important and that there is a need for Community policy guidelines. There is a recognition that the Community already possesses a large range of competencies on energy matters based on the Treaties and that a Community dimension to energy policy, while respecting subsidiarity, can bring added value in some areas, particularly in the areas of Research and Technological Development (RTD), international relations and environmental protection. All participants welcomed the opportunity of continued dialogue on the many important energy issues raised by the Green Paper.
21. In conclusion, the debate on the Green Paper demonstrated that there is a wide range of views as regards the priority to be given to basic objectives, the desired degree of Community intervention in the energy market and in particular the instruments to be used but that it is not going to be possible to satisfy all interested parties on all their preferences and choices will have to be made. Overall, the debate on the Green Paper and the many contributions from all sides has provided a valuable input for the Commission in drafting this White Paper, in particular the energy policy guidelines and the measures that need to be implemented in order to give these guidelines effect.

⁽⁵⁾ European Parliament, Report n° A4-0212/95 and Resolution of 10 October 1995.

⁽⁶⁾ CES 804/95 of 5 July 1995, Opinion of the Economic and Social Committee.

⁽⁷⁾ CdR 241/95, Opinion of the Committee of the Regions.

⁽⁸⁾ The contributions received are made available by the European Commission's Services (DGXVII).

II. THE GENERAL FRAMEWORK

22. In defining energy policy objectives it is necessary to place them within the economic and political framework of the Community. The main actors in this framework are, of course, companies that need to operate in an efficient legal and fiscal framework which encourages investment and innovation and that are protected against undue public and regulatory intervention. This overall framework can be characterised by four key concepts:

- external dimension - globalisation of markets;
- increasing environmental concerns;
- technology developments;
- Community institutional responsibilities.

2.1 External Dimension - Globalisation of Markets

23. The most persistent trend in the world economy over the last few decades is that of globalisation of markets. Regional markets, with their specific characteristics as regards both consumer behaviour and needs are becoming less important. There are numerous driving forces behind globalisation; most importantly far reaching changes in communication, transport and technology. Similarly, there are numerous consequences of globalisation, of which intensified world-wide competition is one of the most important.

24. As the Community's economy becomes increasingly subject to globalisation so do the present unexposed sectors of the energy market. The global aspects of energy markets are reinforced by the significant strategic aspects related to energy policy, in particular as regards security of energy supplies, and the considerable international trade in energy products, due to resources often being located in one region and markets in another.

25. The trend towards globalisation of the energy sector has been reinforced by recent political change, particularly in the countries of Central and Eastern Europe and of the Community of Independent States (C.I.S.). At the economic level, the signature of the World Trade Organisation (W.T.O) Agreement signalled a strong commitment by the major economies to trade liberalisation and market-oriented policies. Also of major significance was the signature of the Energy Charter with its commitment to the liberalisation of trade and investments in the energy sector.

26. In establishing new energy policy guidelines, full account must be taken of globalisation and the "One World" concept. Better relations with third countries and the development of the international energy dialogue are central aspects, all the more so because some of these trading partners are not politically stable. But it is even more important to ensure that European industry, including the energy industry, is structurally and technologically well adapted to face up to the increased competition and take advantage of the opportunities

resulting in globalisation. The strong forecast economic growth in certain developing countries and even stronger growth in energy consumption will lead to profound changes and new opportunities. On the positive side Community energy enterprises whose competitive position is being strengthened by the integration of the Community's energy market, should be well placed to take advantage of this new environment.

2.2 Environmental Concerns

27. The energy sector must be included in any environmental protection policy, since every energy action has some impact on the environment, be it at the local, regional or global level. In addition to honouring the series of international environment agreements to which the Community is a party, integrating environmental concerns has become one of the key objectives of energy policy. Such an integrated energy/environmental framework contributes to the achievement of sustainable development.
28. At the global level, the increase in emissions of manmade CO₂ and other greenhouse gases creates concern because they have a global warming potential which could result in irreversible climate change. The problems related to spills, waste, noise, amenity damage and atmospheric pollution produced by local emissions, which have environmental and public health implications, are both more conspicuous and more manageable than the global environmental problems and so they tend to get more attention at the local level and are more effectively treated. However, all types of environmental problems, including those which have less perceptible impacts such as global warming, must be the subject of ever increasing efforts to find acceptable solutions. It must also be borne in mind that environmental problems are complex and actions have to be avoided that solve one specific environmental problem, aggravate or even create new environmental difficulties and lead to no net environmental benefit.
29. To meet these environmental challenges, a high degree of coordination and integration is required. Existing measures in the energy sector and in all energy consuming sectors at regional, national, Community and international levels must be properly implemented. Exploring the complementarities between energy and environment must be done in the framework of sustainable development; there is, in particular, scope for a closer interface between competitiveness, job creation and environment. However, the move towards liberalised energy markets within the Community adds to the need to ensure a high level of environmental protection in accordance with the Treaty. The creation of the single energy market can then be an important driving force in achieving environmental goals and responding to public concerns about the environment.

2.3 Technology

30. Technology and in particular the development of new technologies will have an important impact on competitiveness and ultimately on the labour market. Furthermore, technology contributes to achieving other energy policy goals, in particular security of supply, by improving access to indigenous energy resources, including renewable energies, by helping to improve the fuel mix and by achieving higher energy efficiency and further energy

savings. Technology can also provide answers to some of the major environmental problems that face not only the Community, but also the world. Technological development is in the main market driven but a research and technology development base and the mechanisms for its' transfer to the market are vital. Companies do not always have the means, or are willing to take the risks to pursue advanced technologies. The conclusion is that public support for RTD is essential. In this context, and given the global competitive situation in which RTD plays a key role, the Community cannot afford to neglect its own research and development activities which are important in maintaining and strengthening its technological base and eventually its enterprises. In a nutshell, the Community's technological base which includes both energy and key enabling technologies, notably advanced information technologies, is fundamental to its industrial strength and ability to achieve competitiveness and growth and to meet environmental commitments and, thus, to the development and implementation of energy policy. Energy policy needs to take this into account.

2.4 The Community Institutional Responsibilities

31. A final point of importance is the definition of the roles of the Communities, the Member States, the regions and the local level. It has already been established that the principle of proportionality must prevail and that, in the light of the current trend of deregulation, regulation must be limited to a minimum and should not be proposed where the market itself can induce the necessary changes. These are general principles which apply at all levels, including, of course, the level of the Community. In a situation where it is a prime concern of the Community to open up markets and remove protectionist national policies, it would be unwise to propose interventionist policies at the Community level.
32. Some regulation is needed to correct market forces and to meet agreed regulatory objectives, if all energy policy objectives, in particular the construction of the internal energy market, are to be achieved. The pursuit of market based policies has resulted in strong political pressures to reduce or remove unnecessary regulations that could impose additional costs and reduce the overall competitiveness of industry. The underlying assumption of deregulation is that the market mechanism in many areas is the best tool to maximise effective use of resources. The Commission recognises that a consistent and transparent approach is necessary when proposing legislation and that measures proposed should be sufficient only to solve the problems identified and go no further. Such were the main recommendations of an Independent Group of Experts established by the Commission to examine, with the aim of improving competitiveness and employment, how to simplify Community and national legislation and reduce its burden⁽⁹⁾.
33. In the energy sector the existing "acquis Communautaire" is not extensive, even so there is some legislation which could be outdated and obsolete. The Commission has therefore recently submitted a report containing a review of legislation in the oil sector and on energy

⁽⁹⁾ COM(95) 288 final of 21 June 1995 - Group of Independent Experts for Administrative and Legislative Simplification.

efficiency⁽¹⁰⁾. In addition, energy legislation has to comply with the guidelines which entail a cost-benefit analysis of all new legislative proposals and also their impact on business in general.

34. Within these legislative guidelines, the Community has a number of clearly defined responsibilities emanating from the Treaties, but these responsibilities have to be exercised on the basis of the different rules and procedures in each of the three Treaties. There is, however, a need to clarify the division of responsibilities in the other areas of energy policy between the various levels. It is the role of the Commission to ensure a full implementation of these responsibilities while fully respecting the principle of subsidiarity, contained in Article 3b of the TEU⁽¹¹⁾. Community action must focus on those areas where real added value can be achieved, and where existing national policies in the energy sector create barriers to trade or other market distortions that prevent the achievement of agreed energy objectives.
35. In parallel to the integration of Member States' economies through the internal market, energy policy should facilitate a process of cooperation at Community level on agreed objectives. This process will start from existing national policies, not with the objective of imposing any kind of harmonisation in the fuel mix, but to ensure that developments are not detrimental to the functioning of the internal market. In order for this process to work effectively it is necessary to define both the goals and a common strategy on how to achieve these. Increased consultation and cooperation and a shared analysis of the energy situation are also required to ensure that the different national energy policies do not undermine common goals.

III. CURRENT ENERGY TRENDS AND POSSIBLE ENERGY FUTURES

36. Energy decision making and guidelines need to be placed in the context of a shared analysis of the energy situation and future trends. Therefore, the preparation of the White Paper was accompanied by the development of such an analysis with national administrations, industry and academic experts. The analysis below assumes that energy policies are designed in a more integrated Community that is successful in achieving improved environmental quality and higher economic growth against a background of increased international cooperation and consensus.

⁽¹⁰⁾ COM(95) 391 final of 26 July 1995 - Review of Community Energy Legislation.

⁽¹¹⁾ SEC(92)1990 of 27 October 1992 - The Principle of Subsidiarity.

3.1 Emerging Energy Trends

37. The extensive studies⁽¹²⁾ carried out by the Commission indicate a range of possible energy futures. Some of the key messages emerging which may have policy implications for the Community are as follows:
- Europe will significantly increase its dependence on imported energy;
 - Gas will compete with oil as a leading component of the fuel mix;
 - European consumers will become increasingly dependent on 'grid' supplied energy;
 - There is considerable flexibility as to the final shape of the future fuel-mix. The weight given to climate change concerns, the effects of technology and the liberalisation of markets and the fact that some renewables are on the threshold of economic viability will be the major determining factors.

3.2 Global Context

38. Energy developments in the Community are increasingly influenced by what happens in other parts of the world. World energy consumption continues to grow by 2% per year on average, double the Community rate, but with energy consumption in some of the emerging economies increasing yearly by 6% or more. In absolute terms however, the increase per capita is still higher in developed countries. This rise in non-OECD energy consumption is leading to important changes in energy markets in South- East Asia and potentially around the world and to significant changes in the traditional patterns of energy flows from the energy exporting countries.

3.3 World Energy Supply and Demand

39. At the world level, energy use is forecast to grow from 8.5 billion tonnes of oil equivalent (btoe) at present to 13 btoe by 2020. Notwithstanding the overall growth in demand, the physical availability of energy is unlikely to pose a constraint in the foreseeable future. Past concerns regarding available oil reserves have been eased by the pace of technological developments in exploration and production. It is therefore expected that oil, and consequently all energy supplies, will remain affordable, even if prices are occasionally volatile. Much of the world's vast reserves of solid fuel can be brought to market at considerably lower cost than the other main sources of primary energy and so coal can be expected to maintain its share of global energy supply due to its inherent price advantage. Gas will be the fastest growing fuel in the medium term. In the developed world, its environmental advantages combined with the lower capital costs associated with its use will make it the first choice in non-transport sectors, particularly electricity generation. Nuclear's

⁽¹²⁾ 'European Energy to 2020: A Scenario Approach.' Issued by the European Commission ...1995/6.

future share of world primary energy depends upon national programme decisions yet to be taken; however, in Asia the prospects for growth in nuclear power are important.

3.4 Community Energy Supply and Demand

40. In the Community there will be a steady growth in energy demand, compared to some other regions, with gross inland consumption increasing at slightly under 1% yearly. The demand in the industrial sector will stabilise at present levels while the tertiary-domestic sector will show a slight decline. Transport growth will continue and therefore will consume more energy in spite of gains in vehicle efficiency.
41. On the demand side, natural gas consumption will show the greatest volume increase. Demand will at least double, mainly for power generation. In fact, electricity generation by gas-fired plants could reach almost half of total thermal capacity, most of it combined-cycle plants. In contrast coal and nuclear are expected to lose market share. A degree of decentralisation emerges in power generation and the marginal cost of electricity production is predicted to be slightly lower than at present. To serve the power station demand, a doubling of gas pipeline and LNG capacity will be required. There is likely to be a limited increase in demand for heavy oil products, reflecting the fact that the opportunity for growth is confined to the transport sector.
42. In market share terms, the prevailing trend in Europe is of growing penetration of electricity and gas. Heat from decentralised cogeneration plants and renewables, in particular biomass, biofuels and wind, could make significant gains, squeezing the share of oil, although oil will still continue to hold the largest overall market share at around 42%. Solid fuels will remain significant in the thermal electricity market and could retain a share in excess of a one third of that market by 2020. Electricity generation from renewable sources and waste will considerably increase.

3.5 Environment and Technology

43. A significant proportion of new technological development will be driven by environmental considerations. Renewable energies are expected to increase substantially by 2020. Energy intensity will continue to improve as new investments using more energy efficient technologies are made and other methods of managing demand are advanced. On the supply side, energy efficiency improvements could be particularly significant in electricity generation, while improved exploration and production technology will continue to release 'new' recoverable oil and gas reserves.
44. Without strong policy interventions, rising energy consumption will cause Community CO₂ emissions to increase substantially above 1990 levels over the next 25 years. All sectors of the economy would continue to emit CO₂ in substantial quantities. Typically the tertiary-domestic sector produces 22%, industry 18%, transport 28% and the electricity sector 32%. These trends in CO₂ emissions are incompatible with the Community's international commitments. It would take a strong switch to non-fossil fuel electricity, essentially nuclear and renewables generation, to reduce substantially CO₂ emissions from the electricity

sector. Such a radical shift could achieve a one third cut in CO₂ emission below the 1990 levels, in which case electricity's share of CO₂ emissions would drop to 22%.

3.6 Indigenous Production and Import Dependency

45. Community energy production seems set to decline, perhaps by one fifth by 2020. Although its onset could be considerably delayed by technological progress, the combination of increasing energy demand and an eventual decline in indigenous production would result in a growing trend in dependence on third countries. Import dependency, currently close to half of gross consumption, could move towards three-quarters by 2020. Dependency on imported natural gas increases most as a consequence of the rapid increase in demand. A significant share of the Community's gas will come from Norway, an EEA partner. Dependency on coal imports could also increase as a result of declining domestic production. The Community is already heavily dependent on imported oil.

IV. GUIDELINES FOR ENERGY POLICY IMPLEMENTATION

4.1 Introduction

46. Energy policy, like all Community actions, will ultimately be judged on the extent to which it contributes to the central objectives of the Treaties, in particular market integration, sustainable economic growth, job creation and prosperity for its citizens. In this context the following objectives

- overall competitiveness;
- security of energy supply;
- environmental protection;

are considered as being most relevant to the energy sector. It is difficult to think of energy measures which do not have some effect on at least two and quite often all three of these objectives but these effects can be contradictory. Energy policy must aim wherever possible, to reconcile these objectives while being consistent. In this endeavour, the Community already has a sound base since many of its actions in the energy sector are consistent with all three objectives. A future priority will be to ensure that in a long-term perspective the consistency of Community energy actions is maintained and where possible strengthened.

47. However, sometimes a choice has to be made on the relative weight to be given to these respective policy objectives. Even if in the present situation urgent action is not needed as regards the security of physical energy supplies, growing energy dependence and the risk of at least economic shocks due to higher priced energy sources will require the Community to remain vigilant and to take a long view of this central energy objective. In

the past, energy policy in Europe was based on one fuel first coal, and then subsequently oil. Experience has shown that dependency on one fuel can lead to serious problems if there is a crisis situation. The Community is now in a much more comfortable situation, given the diversity of fuels but this situation could possibly change by the increasing use of imported fuels. The Community has the possibility of further improving this situation with nuclear and by a technological push in the development of renewables and clean solid fuel technologies in the long-term which could further increase diversification.

48. Greater competition and environmental protection in the Community can best be achieved if these two objectives are approached in a complementary manner. As the energy sector becomes fully exposed to competitive forces through further market integration, it could make a significant contribution to overall Community competitiveness. Given the present economic circumstances of the Community and the challenges it is facing on world markets this goal is of the utmost importance. In advanced economies the demand for public goods such as environmental protection is high and, if appropriate policies are pursued, this results in the development of energy technologies that are generally far less harmful to the environment than conventional technologies. In such a context, environmental goals should be achieved through measures that do not impact on industrial competitiveness and integrated energy and environmental technologies should be preferred to add-on ones. In a longer perspective, an optimum solution which took into account full costs and benefits could be developed within a Community framework and in cooperation with other industrialised countries.
49. While the three objectives referred to in para 46 above remain paramount, other dimensions, notably social and economic cohesion cannot be neglected. It is essential that in a more competitive market this social role is not undermined, in view of the importance of energy for the quality of life and for the creation of jobs. A further important objective of the Community is to promote solidarity and cohesion between regions which finds expression in a number of measures that seek to close the economic gap between the richer and poorer regions. A Community energy policy can make an important contribution to this objective through, on the supply side the development of energy infrastructures that would facilitate the access of energy products to the remote and less-developed regions of the Community, particularly the ultra-peripheral regions, and by helping these regions, where possible, to increase their energy production capacities. At the same time the Community needs to encourage energy consumers through their local authorities to develop a more active role.
50. The energy policy guidelines have to be based on all the existing powers of the Communities in order to achieve the energy objectives set out in this White Paper. The Treaty on European Union allows energy actions to be developed, even if it does not explicitly recognise the legitimacy of specific energy responsibilities, except through the reference to energy in Art.3 and in Art.129b. On the other hand both the ECSC and Euratom treaties provide for specific energy policy actions.

4.2 Integration of the Market

4.2.1 *The general approach*

51. The setting up of a general policy framework for the smooth functioning of the Community's internal energy market can give all market players stable and long-term signals for investments. These framework conditions need to take into account the diverse market structures as well as the supply and demand situations of the Member States with the objective of securing more compatible national situations which would ensure that obstacles do not arise to the smooth functioning of the market.

4.2.2 *The internal energy market*

52. The prime objective will be to liberalise the internal market for electricity and natural gas. The completion of this objective is central to the development of general energy policy guidelines which should facilitate the working of the integrated market. Common objectives for energy supplies and the promotion of new and more efficient technologies in the market and their support through financial instruments are only justified if the results of these Community efforts are for the benefit of a large number of European consumers through an effective functioning of the European market. Once an adequate legislative framework for liberalisation is put in place, the Community will play a major role in ensuring obligations are effectively implemented in conformity with the Treaties.

53. The Treaties and secondary legislation provide a set of obligations for the freedom of establishment, the free circulation of goods, market transparency and energy efficiency standards. All these obligations have to be met and the Commission has the responsibility to ensure their fulfilment and to promote transparency. Several actions will be continued and developed, notably:

- the application of the Treaty and the efficient working of the internal market;
- the application of Community law will continue to be made transparent in the annual internal market reports;
- the Commission will make public all the national implementing measures in order to facilitate the use of Community laws;
- the codification, consolidation and recasting exercise started in 1995 with the Regulation 1056/72 and other energy Acts will be pursued at the same time as the re-evaluation of existing legislation.

54. Parallel to the above measures, energy products will have to meet quality and safety requirements. Although many of the problems arising from differences in national legislation and the application of different norms have already been identified by the Commission with the close cooperation of industry and public authorities, there still remains some residual problems. In order to pinpoint these remaining barriers, the

Commission will closely consult with industry in order to identify where additional standards are required. Once this has been done, it will be necessary to ensure that, on the basis of precise Commission mandates, the European Standardisation Bodies (CEN/CENELEC) speedily establish appropriate standards.

55. Technical regulations are appropriate instruments for the promotion of energy efficiency, particularly for domestic or industrial appliances. For the purpose of promoting national efficiency measures, Member States have adopted national technical rules which, when they did not apply the principle of mutual recognition, have had negative effects on the free movement of goods. The Community has the responsibility, by virtue of Article 7a, of taking steps to resolve this situation. The Community, in making its proposals, will also need to take into account the need to promote innovation. The Commission will make proposals in 1996 to ensure that energy efficiency becomes an essential requirement, as a basis for mandates to European Standardisation Bodies⁽¹³⁾, in new and existing harmonisation Directives on energy consuming equipment. This approach should reconcile legitimate energy efficiency objectives and the prevention of obstacles to trade with the necessary flexibility required for industrial innovation.
56. In order to identify the areas which need further standardisation action and to improve the consistency of the work done in the European bodies in charge of standardisation in the energy sector, the Commission will propose to the European Standardisation Bodies, the creation of an energy working group which would give an assessment on the contribution of European Standards in particular for the promotion of energy efficiency, renewable energies and energy transportation.

4.2.3 *The level playing field*

57. For economic operators to have full confidence in the internal energy market and to be assured that market principles prevail, it will be essential that there is a maximum of transparency and consistency in applying the competition provisions of the Treaties. The Commission has guidelines on state aids for environmental purposes which also cover state aids for energy efficiency and renewable energy. These guidelines include the possibility of more favourable thresholds for renewables. During the process of revision of the present guidelines, the Commission will consider whether appropriate adaptations are needed for renewables and their contribution to energy policy objectives.
58. Where specific aid schemes are authorised, such as state aid to the coal sector in a number of Member States (Decision 3692/93/ECSC), it is important that the Community objective of a phased reduction and transparency of such aid is achieved. For coal, the aim is to ensure that in the medium term Community coal production costs decrease, taking into account coal prices on the international markets, and thereby, enable the coal industry to make further progress towards economic viability.

⁽¹³⁾ COM(95)412 ,Broader use of Standardisation in Community Policy

59. In the internal energy market, competition rules need to be respected. Exemptions from this general rule need to be handled in a restrictive manner to avoid unnecessary distortions of competition. In particular, in the energy sector where public service obligations have been imposed on undertakings to safeguard consumer interests, it will be of prime importance to ensure their full transparency. Without prejudice to the results of current negotiations on the internal market for electricity and gas, it will need to be considered in the future whether general criteria need to be established to judge those cases in which the application of the competition rules of the Treaty would obstruct the achievement of such public service obligations, in order to support the application of Treaty rules in a coherent and predictable manner.
60. The analysis of future demand and supply developments has shown that all energies, fossil or non-fossil, including nuclear, will be required to cover a growing energy consumption in the Community. Consequently, all forms of energy should have a fair chance to compete in the market. Energy prices, especially electricity prices, should not be used as parafiscal instruments to support specific forms of energy since this will create distortions of competition unless such measures reflect externalities. However, certain forms of energy like renewables may need to be supported initially through specific programmes or subsidies in order for them to find a place on the market. Such support should be given in a manner that is least harmful to competition and to this end, the possibility of further policy development in this area may need to be considered.
61. Excise duties on mineral oils, which are a major source of government revenue vary significantly between Member States. Comparable excise duties have not been introduced for other energy products, at a Community level, and the Commission will analyse whether it is necessary to extend the excise duties on mineral oils to cover competing energy products. This subject needs very careful analysis as the various forms of energy do not follow the same pricing philosophies (costs plus versus market value), and as there is inequality of treatment in some cases between fuels for similar use. It should be noted that some Member States, on their own initiative, and in accordance with present Community legislation, have introduced taxes on competing products such as natural gas and coal.
62. A revision mechanism exists that provides for the possibility of adjusting established minimum rates of oil excise duties with a view to improving the operation of the internal market. However, the difference between minimum rates and real rates set by governments is now so big, notably in respect of motor fuels, that any adjustment of the minimum rates in order to influence the market and improve convergence of excise duties will have to be of substantial nature. Seen from an energy viewpoint, the removal of distortions resulting from a lack of approximation of Member States' effective rates, particularly on motor fuels, will have to be taken into account when considering a future fiscal structure on energy products. In the household sector, oil products for heating purposes are usually subject to an excise tax which, in some cases, do not apply to alternative fuels.
63. In an open competitive energy market where fuels are substitutable, ideally competitive and transparent pricing should prevail. However, ideal conditions do not always prevail and a helping hand may be necessary to ensure that transparency of prices are assured without

disturbing confidentiality. The Community's range of instruments that ensures that most fuel prices are reported in a transparent manner and provides a point of reference for users and producers of energy in the Community will be further developed with a view to including taxation transparency.

4.2.4 *Monitoring the internal energy market*

64. Less intervention in the energy market will require an efficient monitoring tool in order to analyse and to understand market developments in such a strategic sector and to ensure that structural and technical changes are not in conflict with energy policy goals.
65. The liberalisation of the markets for electricity and gas will start a process of structural change. Community legislation, which, in the spirit of subsidiarity, offers various options for the organisation of markets in Member states may need to be reviewed to ensure that the outcome is satisfactory. Therefore, the monitoring tool needs to be shaped in a manner to cover, inter alia, the following responsibilities:
- ensure the proper functioning of the internal market;
 - verify that different network access systems result in comparable market openings and market access in Member States;
 - verify that the envisaged procedures for new production capacities ensure the freedom of establishment, especially for independent electricity producers;
 - ensure the business environment offers fair competition for independent electricity producers;
 - establish under Commission auspices cooperation on interconnected systems between national regulatory authorities in both the gas and electricity sectors. This system could be later extended to pan-european networks as they are developed;
 - verify that the envisaged regulatory and arbitration procedures are effective to settle disputes and to ensure fair competition and appropriate transit fees;
 - examine the social and economic consequences of the new market rules and increased competition.

This monitoring will permit the identification of possible needs for further harmonisation.

66. The Community already has at its disposal, through the Treaties and the measures in force for ensuring the transparency of investments, prices and imports and exports, a large range of instruments. These instruments are currently considered unsatisfactory because the administrative burden is not offset by an operational usefulness. This arises first, because information is sent late and therefore published with a delay, and secondly, because the information is managed within each instrument and not centrally so as to take account of

the realities of the internal market where there is a diversity of fuels that can substitute for each other. These instruments could be made more efficient in order to allow policy makers a monitoring instrument covering the whole of the energy market.

67. The Commission will examine with the Member States and with the industrial sectors concerned all the instruments together in order to ensure their consistency and their usefulness. Following this examination, the Commission will propose the necessary adjustments and, where necessary, new instruments in order to provide national administrations with an information network that can rapidly process information, establish a data bank and provide for the rapid publication of reports required by current texts. Subject to the results of the above review, an informatic network project could be introduced in the IDA programme (Interchange of Data between Administrations).

4.2.5 *Creating a favourable climate for investment*

68. In view of the size of investments in the energy area and the role of enterprises, a first priority for the Community will be to ensure that policy initiatives in the energy and other sectors are as neutral as possible as regards their impact on the energy market and ultimately investment decisions. The Commission will use and develop appropriate tools, such as notably energy impact analysis, to assess regulatory measures in the environmental, social and fiscal fields. The creation of a consultative body in the energy field could help in making this analysis more transparent and constructive. A particular concern will be to ensure that procurement procedures for infrastructure projects respect key criteria in terms of transparency and objectivity. It will also be particularly important to remove distortions in the fiscal system that penalise investment in the energy sector in as much as this is consistent with the prime objective for Community involvement in the harmonisation of indirect taxes, namely the proper functioning of the Internal Market and Member States' revenue needs. It will also be necessary to bear in mind other energy policy objectives, notably security of supply and environmental goals. In order that trends can be analysed and possible obstacles removed, there will also be a continuing need at Community level for transparency on major developments in the Community's energy production and transmission capacity.
69. Given the volume of the financial intervention of the Community, such as EIB loans, RTD funds, structural and cohesion funds and ECSC loans, in the energy sector the Commission has to make sure that, first, these investments are consistent with the integration of the market and trans-border competition and, secondly, they are in line with energy policy objectives, in particular concerning energy diversification and the environment. At the Community level, energy considerations need to be taken into account when approval is being given to specific investments. To that effect, clear guidelines should be established, taking into account the rules of each financial instrument as is done in the structural funds. The environmental objectives of the Cohesion Fund can also contribute to energy objectives such as energy efficiency, renewable energies, cogeneration and the promotion of clean coal technologies. As regards major infrastructure projects in the energy area that have a Community dimension, the achievement of an internal energy market will provide a solid

