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Proposal for a

COUNCIL DECISION

concerning the promotion of energy efficiency
in the Community

(presented by the Commission)

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SUMMARY

An evaluation of the energy policies of the Member States carried out by the Commission in 1988 and 1990 showed that there has been a levelling off in the energy intensity of final demand and concluded that, unless urgent and effective measures are adopted, the Community will fall short of the Council's 1995 energy efficiency objective of a further 20% improvement in the energy intensity of final demand.

Several Member States are currently preparing action programmes to tackle the threats of climatic change due to the greenhouse effect and to reduce the negative impact on the national economy which a third oil shock could have. Other Member States are also sure to follow this path. It is essential that these initiatives are located in a coherent Community framework, which ensures their compatibility with the completion of the internal market. It is also essential that all the Member States make comparable contributions towards achieving the common objective.

The Community therefore intends to launch a series of coherent, complementary energy efficiency measures entitled "Specific Actions for Vigorous Energy Efficiency (SAVE)". The programme will initially last five years and is designed to be the essential core of Community energy efficiency policy.

It will focus on three major areas: technical measures, financial measures and measures relating to consumer behaviour. It will also include a series of legal measures which the Commission will draw up for proposal to the Council and Parliament. In addition it will comprise measures partially financed by the Community to provide back-up for structures and action in the Member States on energy efficiency. Finally, a suitable system for the exchange of information at Community and international level will be developed.

The uncertainty regarding fossil fuel supplies in the 1990s and the energy/environment interface are problems for both the Community and the whole world. Because these are global issues, SAVE will endeavour to

establish links with all interested parties and in particular the countries of Eastern Europe to propagate the Community's experience in energy efficiency while learning from the successful initiatives taken in other countries.

1. INTRODUCTION

In September 1986, the Council of Ministers set energy objectives to be attained by the year 1995. Among these objectives was the requirement for the Community to improve its energy intensity of final demand by at least 20%. Reviews of Member States policies carried out in 1988 and 1990 establish that there is little likelihood of this objective being achieved unless a series of active energy efficiency programmes are established.

The late 1980's have been categorized as a period of soft energy prices. The adequate energy supply situation and the 1985/86 oil price falls led to a measure of complacency with regard to energy efficiency. However, it is an inescapable fact that in 1989 the Community depended on imports for 49% of its total energy requirement and that imported oil accounted for 35% of the total net energy imports. Since most of the Community's oil supplies come from the politically volatile Middle East, it is imperative that the use of energy sources within the Community be optimised. Increased energy efficiency not only improves the balance between indigenous and imported energy but prolongs the life of the world's finite fossil fuel energy resources.

The environmental debate on the "greenhouse effect" has rightly concentrated on the energy/environment interface as the most important axis in the resolution of the "greenhouse" problem. National and international commitments to the reduction of CO₂ levels have focused attention on energy efficiency as the quickest and most effective mechanism for achieving these reductions. The CO₂ problem is a global one and must be tackled on a global level. It is therefore of the utmost importance that effective energy efficiency measures are disseminated as widely as possible. The Community, the United States, Japan and Canada have well

developed energy efficiency programmes which can form the basis of a mutually beneficial exchange of information. However, the countries of Eastern Europe have as yet limited experience in the field of energy efficiency and there is a vital role for the Community to play in ensuring that these countries benefit fully from available experience.

Energy efficiency, by reducing the costs of industry and by increasing the disposable incomes of individuals, is a powerful driving force towards industrial competitiveness and social development. Therefore an active Community energy efficiency policy would contribute to the establishment of the Internal Market through the creation of a single market in energy efficiency products, an increase in Community competitiveness and regional development. The Community dimension of energy efficiency is necessary to avoid a situation where individual Member States might set contradictory or restrictive standards.

II. OBJECTIVES

Since the first oil crisis of 1973, energy efficiency has been one of the key components of Community energy policy. The Community's commitment to energy efficiency has been evident in the many measures aimed at improving the rational use of energy which have been adopted by the Council since 1974.

It is essential, however, that Community action in this field is revived in the light of changes in economic trends for energy and the need for greater environmental protection. In the energy policies pursued over the last few years by most Member States, energy efficiency has generally become a lesser priority. In addition, the outlook for completing the single market necessitates the rapid establishment of Community Instruments needed to remove existing barriers to the free movement of equipment and prevent fresh obstacles from being created by uncoordinated action by the Member States aimed at improving the energy efficiency of equipment.

A. ACTION IN THE MEMBER STATES

The success of the Member States' and the Community's energy efficiency programmes was most striking during the 1973-85 period when the energy intensity of final demand, i.e. the ratio of final energy consumption to GDP, improved by more than 20%. This excellent performance, which was matched or surpassed by other OECD members, led the Council to set an energy efficiency objective for 1995 of a further 20% improvement in the energy intensity of final demand. This figure was set on the basis of evaluations of potential showing that there were major possibilities for energy savings.

The excellent results obtained between 1973 and 1985 referred to above are due primarily to high energy prices and major restructuring in industry during this period but also to measures taken by the Member States. The latter mobilized substantial budgetary resources to promote R&D, the demonstration and placing on the market of new energy technologies and offered financial incentives for improving energy efficiency in general. It should be noted that even during this period some Member States such as Greece, Portugal or Spain recorded an increase instead of a drop in energy intensity, which clearly shows the impact of certain industrial development factors on energy savings and rational use of energy.

It is also worth noting that the figures recorded in the final part (1982-86) of the period in question reveal in themselves that the trend towards an improvement in energy intensity has declined drastically in many Member States and even gone into reverse in four of them (Germany, the Netherlands, Belgium and Ireland). This is the exact opposite of the situation for 1973-82 and reflects a period marked by the completion of restructuring in industry and stagnation in energy prices, followed by a clear drop. This shows, firstly, that a good deal of easy energy savings had been made and, secondly, that high energy prices had little additional effect on consumer behaviour. It is thus not surprising that during the period 1986-89 there was a further falling off in the improvement in average energy intensity in the Community.

The majority of Member States have reduced or even completely abolished their programmes which directly support energy efficiency-linked investments. The focus has been on information programmes and a substantial disengagement of the public authorities, which consider that the energy efficiency market must be allowed to operate independently. Four Member States - the United Kingdom, the Netherlands, Spain and France - have reviewed the situation regarding organizations responsible for energy efficiency set up in the 1970s in order to make them more economically viable and define new terms of reference. Only Italy, the Netherlands and Denmark have maintained a certain level of expenditure for R&D in energy efficiency.

In the past year, i.e. 1989-1990, a major revision of energy efficiency policy has taken place in some Member States. These reviews which were instigated principally by concern over environmental issues have led to the establishment of new energy efficiency programmes which are more far-reaching than even those established at the height of the energy crises of the 1970's. For example, the Danish programme "Energy 2000" calls for improvement in thermal insulation for buildings, optimisation of electricity consumption, energy labelling for domestic appliances, the application of "least cost planning techniques" by the utilities as well as the establishment of standards for heating and cooling by electricity. The Dutch National Environmental Policy Plan mirrors the Danish proposals for energy efficiency and includes many regulatory measures in the buildings and domestic appliance sectors.

The developments which have taken place in the Persian Gulf since August 1990 have caused most Member States to reexamine their energy efficiency policies and plan new measures for saving energy and promoting renewable energies.

The action taken in the Member States to promote energy efficiency over the last fifteen years can be divided into three phases:

- the first, from 1974 to the mid-1980s, in which the Member States gradually adopted effective instruments which led to the positive results indicated;
- the second, from the mid-1980s to 1989, in which the promotion programmes gradually stagnated or stopped altogether, resulting in a slowdown of the improvement in energy intensity;
- the third, from 1989 onwards, in which the Member States have appeared to be heading increasingly towards a determined policy of energy efficiency, initially brought on by the threats of climatic changes due to CO₂ emissions, then out of concern to guarantee energy supplies and limit the impact on the economy which a third oil shock might have.

Without effective coordination at Community level, the action which the Member States might take during this third phase could jeopardize the completion of the internal market. This would be the case if financial aid or tax incentives which differed greatly from one Member State to another were introduced, or if charges were imposed on consumers in some countries and not in others, or again if certain requirements for equipment (e.g. labelling, national type approval, performance standards) were introduced in a haphazard fashion across the Community.

B. ACTION AT COMMUNITY LEVEL

Since 1974 the Community has endeavoured to promote the rational use of energy via targetted programmes (such as the Energy Demonstration Programme, the Energy Bus Programme, the Industrial Audits of the Major Energy Consumer Sectors, etc.), via legislative measures (namely, Directives concerning heat generators and the labelling of domestic appliances) and by a large number of Recommendations, Resolutions and Council Decisions.

The targetted programmes have successfully contributed to the penetration of new energy technologies and have drawn industrial consumers' attention to many examples of wasted energy. Research and demonstration measures and the introduction of new technologies into the market are going ahead at present in the context of the JOULE and THERMIE programmes. Since the start of its R&D and demonstration programmes in the field of energy efficiency, the Community has committed ECU 100 million and ECU 300 million respectively to these programmes.

Although the targetted measures have been reasonably successful, the legislative measures, which until now were relatively limited in number and modest in ambition, have not fully exploited all available potential. In view of their non-binding character, the Recommendations and Resolutions had only a limited scope.

The change in energy market conditions produced by the drop in oil prices in 1985/86 and the growing importance of the energy-intensive transport and building sectors has led to an increase in overall energy consumption and a dramatic fall-off in the improvement in the rational use of energy.

During its meeting of 26 November 1986, the Council declared that, in spite of the soft energy market, there were many possibilities for energy efficiency investments displaying an economic interest which could improve industrial competitiveness and benefit the environment. As the situation showed a worsening trend, the Commission sounded the alarm in 1987 by presenting a Communication entitled "Towards a continuing policy for energy efficiency in the European Community".¹ Of the 14 energy efficiency measures proposed by the Commission in its Communication, only those relating to improved information on energy efficiency have been adopted by the Member States. As the Communication has had no appreciable effect, it is thus for the Commission to act at Community level.

Overall, the Community has achieved a 11% improvement in primary energy efficiency over 1980/88, 3.8% of this over 1985/88. The latter point is significant. The existing Community energy policy objectives aim for a 20% improvement in energy efficiency by 1995 over the level in 1985. If the rate of efficiency improvements remains at its average level over 1980/88 (1.47% p.a.), then the Community can only expect to improve energy efficiency by another 10% over 1988/95. This would be equivalent to an energy efficiency improvement of under 14% for the period 1985/95, significantly less than the objective established in EC energy policy. While the rate of improvement prior to the 1986 oil price collapse was clearly better than that thereafter, the fact that at no point in time in the past have efficiency improvements reached the rate needed to satisfy Community energy policy objectives indicates that more stringent measures must be undertaken.

1. COM(87) 223 final.

The aim of the SAVE programme is to introduce these measures. As it involves medium- and long-term measures, their impact by 1995 will clearly be limited. They will come to fruition fully only when the existing stock of equipment of medium durability (heating boilers, cars, domestic appliances, etc.) has been replaced by higher performance appliances.

1. The need for Community action

Community action in the field of energy efficiency is primarily geared to the aim of speeding up completion of the internal market, with the secondary concern of consolidating a fundamental aspect of energy policy, i.e. protection of the environment.

Efficient use of energy opens up real possibilities, through contributing to the best possible use of resources, improved allocation of funds and an increase in available revenue, for measures to be taken to achieve the Community's 1992 objective. Completion of the internal market will also be enhanced by harmonization of rules and standards on energy output, the removal of technical barriers to the free movement of appliances and equipment, reducing disparities in financial conditions for investments related to energy efficiency and by correcting fiscal anomalies which militate against energy efficiency investments.

As shown in the following chapter, several Member States are currently preparing action programmes to tackle the threats of climatic change due to the greenhouse effect and to reduce the negative impact on national economies which a third oil shock might have. Other Member States are sure to follow this path too.

It is essential that these initiatives are located in a coherent Community framework to ensure their compatibility with the completion of the internal market. The SAVE programme should provide this framework:

- by recognizing the usefulness of measures to provide financial and tax incentives;

- by proposing a series of Directives designed to provide guidance for legal and administrative measures by the Member States;
- by providing Community support measures for action in the Member States;
- by ensuring a better information exchange between Member States and non-Member countries;
- and by establishing a network for coordinating national and Community action.

The close link between energy and the environment is now well established. The energy conversion and transport sectors, and indeed the building sector, are chiefly responsible for the production of "greenhouse gases" and other pollutants. The Commission presented to the World Energy Conference in 1989² and at its conference on "Energy for a New Century: The European Perspective" in May 1990 an analysis of energy developments in the Community by the year 2010 according to four scenarios:

Scenario 1: Conventional Wisdom

Scenario 2: Driving Into Tensions

Scenario 3: Sustained High Economic Growth

Scenario 4: High Prices.

This analysis shows that even if SO₂ and NO_x emissions are reduced by 2010, the CO₂ emissions originating from energy use could increase from 2 800 million tonnes in 1990 to 3 200 million tonnes, according to Scenario 1, or even 3 500 million tonnes, according to Scenario 2, in 2010, i.e. respective increases of 14% and 26%. Power generation (36%) and transportation (22%) account for nearly 60% of total CO₂ emissions. The abovementioned study suggests that without a significant improvement in the Community's rational use of energy it is unlikely that high economic growth in a clean environment can be sustained.

2 Major Themes in Energy, special edition of "Energy in Europe", September 1989.

The Commission recently forwarded a Communication³ to the Council which examines the energy/environment interface. The document is unequivocal in its support of energy efficiency as the primary mechanism to limit environmental damage caused by energy use and energy transformation processes and points out energy efficiency as the cornerstone of our future efforts to make the supply of energy services compatible with environmental protection.

It is therefore worth adding that improvements in energy efficiency which are justified on the economic level will inevitably lead to a reduction in manufacturing costs with a positive effect on industrial competitiveness, in particular with regard to North America and Japan.

2. Procedures for Community action

Community action on energy efficiency must take place in the context of the energy objectives approved by the Council on 16 September 1986.⁴ After reiterating the importance of the coordination of the harmonization of national energy policies, these objectives require that the efficiency of final energy demand should be improved by at least 20% by 1995 as stated above.

This objective is still valid today and, under certain conditions which may not apply today but are easily foreseeable, action might even have to be stepped up. Hence, even if new proposals are likely to be presented in the near future, these will not affect the arguments behind stepping up action in favour of energy efficiency.

Community initiatives will also have to reflect the distribution of powers which implies respect for the principle of subsidiarity. The latter means that competence should reside with the level which can provide the best solutions to the problems posed. As the level of action of the Member

3 COM(89) 369 final.

4 OJ No C 241, 25.9.1986.

States displays great diversity, there are legitimate grounds for Community action, which would in addition be implemented on a markedly decentralized basis.

If such action is lacking, national initiatives conducted without coordination and using different resources actually run the risk of impeding the success of initiatives undertaken, thereby threatening the internal market and the convergence of the Member States' energy policies.

The drawing up at Community level of a coherent set of measures relating to energy saving provides, through their very diversity, the flexibility needed for national and regional structures to act within a set framework.

3. Expected results

There is no doubt whatsoever that there is great energy-saving potential in the Community.

It seems, for example, that energy savings of between 20 and 50% could be made on certain domestic appliances if existing stock was replaced by appliances having the best energy efficiency currently available on the market.⁵

In the road transport sector, energy savings of around 20% arising from improvements in vehicle performance and driver behaviour would mean a reduction in fuel consumption of 12 million tonnes of diesel per year.⁶ In view of the fact that most of these savings can be achieved by changes in behaviour, the additional investment costs will not be significant.

5 Possibilities for energy saving in electrical energy applications, Fichtner, Stuttgart, June 1988.

6 Fuel Saving in Trucks through Aerodynamic Styling
Energy Efficiency Office, September 1988.

In the building and industry sectors alone, the technique of third party financing, which consists in reimbursing the financial services of an investment from the energy savings made, could in itself lead to energy savings totalling 75 million toe on the basis of projects which necessitate a minimum investment of more than ECU 60 000 and a maximum payback period of three years. These savings will nevertheless require investments of some ECU 86 000 million.⁷

Overall, it is agreed that energy efficiency measures have the great advantage of producing a rapid effect. Improvements are visible as soon as the project is completed.

In general, the income generated for the investor by energy savings stays in situ and makes a major contribution towards promoting economic activity in often less-favoured regions. This is particularly important for regional development within the Community. Energy savings arising from a cut in energy costs are directly at the disposal of the local economy.

Energy efficiency programmes create a large number of jobs at a cost of only 25 to 45% of that of conventional energy industries. In a study carried out for the Commission,⁸ six technologies for rational energy use in the United Kingdom, France, Denmark and Germany have been examined. This study concludes that stepping up the policy of reducing demand in the Community, aiming to save 140 million toe by the year 2000 (which corresponds roughly to the 1995 objective), would have major repercussions on employment.

7 I. Brown. Third Party Financing Opportunities for Energy Efficiency in the European Community, Kogan Page 1986.

8 Effects on employment of investment related to energy saving in EC countries; EUR 10199 EN.

If all the measures in this programme are applied in full, it will be possible to make final energy savings of 100 million toe per year. This figure corresponds to a 12% reduction in final energy consumption as foreseen in scenario I of the 2010 study. The corresponding reduction in CO₂ linked to this saving of energy has been put at 500 million tonnes per year, i.e. a reduction of over 15% in the emissions estimated in scenario I of the 2010 study, or a reduction of nearly 5% compared to the level of CO₂ emissions in 1990. The SAVE measures alone are insufficient to reach the objective of stabilizing CO₂ emissions by the year 2000, as proposed by the Commission. They will need to be combined with other forms of action, such as continued R&D efforts, fuel substitution, the development of renewable energy sources and the use of economic and tax measures.

III. THE PROPOSED ACTION

The objective of the SAVE programme is to promote energy efficiency by organizational means; it is complementary to the technological and financial measures providing incentives which are also taken by the Community and Member States.

The SAVE programme will develop only medium- and long-term structural measures; short-term action related to the economic situation, such as measures to be taken in the event of oil supply difficulties, will be the subject of separate discussions. These will look into the whole range of possible measures, to be applied by increasing degree of severity according to circumstances.

An initial set of technical measures will be concerned with the performance of equipment. This choice is primarily motivated by the diversity of provisions currently in force in the Member States in this field which represent an obstacle to the completion of the internal market, and it should also be noted that the energy efficiency of equipment is an important factor. The progressive improvement of the performance of equipment of medium durability (lighting, heating, cars, domestic appliances, etc.) enables substantial reductions to be made in the medium term in the energy consumption of a large section of the population. Action on durable equipment - in particular buildings - is no less significant but will take a longer time to bear fruit.

These technical measures should, however, be backed up by making available financial instruments which provide additional incentives in particular in fields which cannot be influenced by provisions relating to equipment performance.

A third category of measures will aim to influence consumer behaviour, which plays a decisive role in the increase of energy consumption.

A. TECHNICAL MEASURES

It is therefore vital, when considering the vast range of possible measures, to give priority to those likely to produce the best results, within reasonable deadlines and at an acceptable cost, in terms of energy savings and in relation to the objective of reducing harmful emissions. Initially use will be made of instruments which produce the least possible constraints, such as voluntary agreements with manufacturers of equipment. Only if this proves inadequate will it be necessary to adopt binding measures.

1. Definition of standards or technical specifications

(a) The building sector, which uses over 40% of final energy consumption, certainly offers room for great improvements in energy efficiency.

The Recommendation and two Directives adopted over ten years ago on the operation of heat generators for heating and hot water production in non-industrial buildings have proved inadequate. It appears that the diversity in requirements established by Member States represents a serious obstacle to the free movement of goods and, in addition, progress in this field depends on the definition of minimum performance levels. A Directive on the approximation of laws concerning performance requirements for new boilers will be presented by the Commission.

This measure will only bear fruit in the medium term, when most existing boilers have been replaced by higher performance equipment. A major shorter term effect can be achieved by making compulsory annual inspections of boilers in service throughout the Community; such a measure is already in force in some Member States. The Commission will be making a proposal to this effect.

A systematic approach is also required with regard to standards for heat insulation. In order to reconcile the variations in standards established

by the Member States, minimum insulation levels for buildings will be specified for the various climatic zones of the Community.

(b) With potential for final energy savings of nearly 10 million toe per year, domestic appliances are another priority sector for Community action.

While a voluntary agreement on improving energy efficiency with domestic appliance manufacturers must be explored, the main effort to be envisaged is the laying down of minimum requirements regarding energy efficiency for these appliances. By 1991 it will be possible to adopt minimum energy performance levels for refrigerators and freezers. Measuring standards for these types of appliances have also already been established by CEN/CENELEC. For other types of domestic appliances the Commission could make use as far as possible of measuring agreements drawn up by associations of manufacturers.

In order to prevent the introduction of minimum performance standards resulting in a relaxation of competition between manufacturers, it will be necessary to revise standards regularly and establish an accompanying system of quality labels for higher performance equipment.

(c) In the transport sector, it is accepted that the Community will soon have to establish minimum performance requirements for cars with a view to drastically limiting CO₂ emissions.⁹ These requirements could, for example, take the form of a non-exceedable fixed average consumption according to vehicle weight.

The Community could also examine the possibility of introducing a system for limiting the consumption of vehicle fleets manufactured by all automotive industries in the Member States.

9 SEC(90) 496 final.

A particular effort will be needed to prevent the performance levels of new vehicles deteriorating excessively during their lifetime. A periodic compulsory inspection of cars should therefore be made applicable throughout the Community. The periodic inspections will also apply to the efficient of anti-pollution equipment.

At all events, car fuel consumption will continue to be decisively influenced by fuel price levels. In a period of high oil prices, this is a direct effect of market forces; in a period of low energy prices, the use of economic and fiscal instruments may prove essential.

2. Cogeneration

A vital source of energy savings is combined heat and power production, or cogeneration. New designs for cogeneration plants in the building, industry and energy industry sectors have received Community financial support in the context of the demonstration programme, and will continue to receive support through the THERMIE programme.

In 1988 the Council adopted a recommendation on autoproduction - also covering combined heat and power production - which focused on improving relations between public services and private generators of electricity. If commercial and structural obstacles to the development of this type of energy production exist, the Commission will make proposals asking the Member States to remove them.

B. Financial and taxation measures

Even though the price mechanism is well-known to be a moving force in the search for better energy efficiency, it is clear that useful measures can be taken to promote the use of certain methods of financing.

1. Promotion of third party financing

In several Member States new methods of financing have been devised in order to stimulate investments in energy efficiency. In these new methods the services for funding the investments are remunerated from the energy savings made.

Going beyond the framework of its Communication of 18 April 1988¹⁰ and the draft Recommendation it contained, the Commission now intends to promote the creation of a European network for third-party financing.

This network will bring together institutions which wish to promote the third party financing of energy efficiency projects; the Commission will examine together with this association the measures to be taken to enable this technique to be disseminated as widely as possible by undertaking inter alia a series of demonstrations. Measures will also be taken in favour of the public sector, which, with its large building stock represents a sizeable market for third party financing services. Indeed in many Member States public accounting rules prevent the use of the TFP mechanism in the public sector. The Commission will be presenting a proposal calling on the Member States to remove obstacles to the use of the third party financing mechanism in investments designed to promote the rational use of energy in the public sector.

2. Least cost planning and demand side management

These methods have been applied successfully in North America as a mechanism designed to create a competitive environment between projects for energy supply and demand. The concept is at present being studied by several energy companies in Europe and the Commission has launched two pilot studies in this sector. An important element in sectoral activity will be a programme of 10 to 15 pilot studies on least cost planning. These studies should establish the viability of this technique in the European context while giving companies supplying the public sector in the Community direct experience of planning mechanisms.

¹⁰ COM(88) 175 final.

Under certain conditions, however, the use of least cost planning may prove difficult. In those cases, demand side management remains an efficient instrument of rational energy use.

3. Taxes and other levies

The use of taxes or other levies to promote energy efficiency and environmental protection has been actively explored for some time by the Member States and the Community.

Some Member States, such as Denmark, follow a policy of high energy taxation in order to keep energy prices stable while many others allow energy prices to fluctuate with market conditions. This should be taken into account in a detailed examination of how energy pricing strategies reflect the real cost of energy to society and how energy taxation might better represent energy efficiency and environmental considerations. In the light of the results of this study the Commission will examine the possibility and desirability of presenting specific proposals regarding energy pricing which take into account energy supply considerations, environmental protection and tax revenue requirements. For example, maintaining high energy prices, even at times when the markets are relaxed, could work in favour of measures to promote energy efficiency, mobilize alternative and renewable sources and represent some sort of insurance premium against the risks inherent in Europe's heavy dependence on energy imports.

These measures could also be accompanied by incentives, particularly tax incentives, to encourage investments designed to reduce energy consumption.

The concept of urban road pricing, i.e. making motorists pay to cross specific urban zones, should also be examined from the point of view of its effectiveness and applicability in the Member States. The R&D work carried out as part of the DRIVE programme and the programmes which will follow it will help to establish a technical and economic basis for this examination.

C. MEASURES RELATING TO USER BEHAVIOUR

Aside from the driving force of energy prices, technological improvements and investments directly linked to energy efficiency, it is possible to obtain a reduction of energy consumption by bringing about a major change in the behaviour of consumers.

In order to effect this behavioural change towards more responsible use of energy, the consumer must be given targetted information of an educational and promotional nature. Despite the importance of involving the public in this new responsibility for energy efficiency, it is essential that those responsible for energy use in the major sectors of industry, building and transport should be made more aware of their energy consumption. To achieve this, education and training in efficient energy use are essential tools.

This twofold action can, however, only achieve the necessary scope if the Member States improve their administrative structures responsible for energy savings.

Some Member States (particularly those which began to implement energy efficiency programmes in the mid-1970s) already have a well-established national structure in this field while other Member States are at a less advanced stage. The Commission's intention in the SAVE programme is to help develop national structures for more efficient energy use and promote the creation of a network linking the authorities concerned.

To achieve this, there is a clear need for regionalization of the action taken, with the setting up and operation of support programmes being placed under the authority of regional bodies and national bodies with regional characteristics. Some Member States already have such regionally-based national bodies (IDAE in Spain, the Energy Efficiency Office in the UK, AMFE in France, ENEA in Italy, etc.). There are also a number of regional authorities (e.g. RhoneAlp Energie, Ente Vasco de la Energia) which,

although not nationally based, could also contribute to the SAVE programme. The Commission intends to make use of the unique experience of these bodies to maximize the impact of SAVE.

(a) As regards training, priority must be given to staff responsible for carrying out energy audits and to those responsible for improving the rational use of energy in industry, construction and transport. His action, aimed at facilitating the introduction of certain legal measures foreseen by SAVE, will be limited in duration; it will be complementary to continuous professional training activities such as those undertaken in the framework of the FORCE and COMETT programmes.

(b) As regards information, special efforts have to be made on energy audits. These are essential before any investment in the more rational use of energy can be made; they are essential for determining energy saving potential and the viability of corresponding investments. This is particularly true in the industry and building sectors but could also apply to major fuel users in the transport sector, such as vehicle fleet operators. Short energy audits (usually lasting a day) for small and medium-sized enterprises, the services sector and large buildings can lead to a whole range of improvements in the rational use of energy; they can also lead to a noticeable reduction in energy consumption. The Commission will be presenting a proposal calling on energy users of a certain size either to undergo periodically an energy audit carried out by a specialist external firm or to appoint an internal energy manager who will be permanently responsible for optimum energy management in the firm.

In the construction sector energy certification needs to be reviewed on a new basis. To facilitate implementation in the Member States, the content and operation of the proposal presented to the Council in 1987¹⁰ will be revised. Indeed there are distinct advantages to the energy certification of buildings, such as greater transparency of the market (which enhances consumer choice), improved energy efficiency and a reduction in emissions which are harmful to the environment.

In some Member States heating charges in multi-occupancy buildings are not based on heat metering but on criteria other than actual energy consumption

¹⁰ COM(87) 401 final.

(for example, flat-rate charges based on occupancy level). This is not a true indication to the consumer of his energy use and is not compatible with responsible decision-making on energy consumption. The Commission will be studying the situation closely and will be presenting a proposal on calculation principles for heating charges in multi-occupancy buildings based on heat metering, thereby providing a truer reflection of actual energy consumption.

It is also intended to establish a customer information scheme which would permit purchasers of domestic appliances to compare more effectively the energy performance of equipment produced by different manufacturers. This scheme will involve the use of a standardized EC equipment label or an information sheet for domestic appliances giving clear and comparable information on energy consumption.

This will require the establishment of a monitoring system to review the energy efficiency of all domestic appliances and present the overall findings in a form which is easily comprehensible to the customer and consumer advice bodies. Monitoring will be carried out by appropriate organizations or independent institutions in the Member States.

Finally, it will be necessary for the utilities to play an active role in promoting energy efficiency. These services should be profitable in themselves and should not lead to major tariff increases.

The Community action programme for improving the efficiency of electricity use approved by the Council on 5 June 1989¹¹ can easily be integrated into the SAVE programme.

Since the rational use of energy and its consequent effects on security of energy supply and the environment are global, an important element of SAVE will be the exchange of experience of energy efficiency between the Community and other countries. For example, the countries of Eastern Europe, where there is considerable potential for energy saving, might benefit greatly from being associated with many of the policy initiatives

12 OJ No L 157, p.32, 9.6.1989.

provided for in the SAVE programme. This argument also applies to developing countries. On the other hand, Japan, the United States and Canada have already shown their capacity for innovation in producing energy efficiency initiatives, and an exchange of experience between the Community and these countries would be profitable to all.

IV. IMPLEMENTATION OF THE PROGRAMME

The programme will be implemented by the Commission on the following basis:

(a) The Commission will take all action arising from the responsibility imposed on it by the Treaties, in particular the preparation of proposals to Parliament and the Council, and their implementation after approval;

(b) The Commission will coordinate a network for the exchange of information between the various national and regional bodies for promoting energy efficiency, and with third countries;

(c) The Commission will draw up guidelines annually for support programmes in the Member States; the latter will submit annually and in conformity with the established guidelines their programme proposals to the Commission;

(d) The Commission, assisted by an Advisory Committee, consisting of national representatives and chaired by the Commission, will examine the annual proposals from the Member States. The Advisory Committee will deliver an opinion;

(e) The Commission, taking the utmost account of the Advisory Committee's opinion, will approve the support programmes in the Member States.

(f) The programmes approved by the Commission will be implemented by bodies responsible in the Member States for the management of support measures under the SAVE programme. They will submit an annual report on the activities undertaken and the expenditure incurred.

(g) The work carried out in the context of SAVE in the Member States will be the subject of an annual examination by the Advisory Committee with a view to evaluating the results obtained and establishing priorities for the

following year.



V. CONCLUSION

If current trends in the consumption and efficient use of energy continue, there is little hope of the Community achieving its 1995 objective of improving by at least 20% the efficiency of final demand. Failure to achieve this objective will have serious consequences for energy supply, the environment and European competitiveness.

It is essential that the initiatives which the Member States have already taken or are preparing to take to tackle the threat of climatic change and reduce the negative impact which a third oil shock could have are located in a coherent Community framework, which ensures their compatibility with the completion of the internal market. The SAVE programme will attempt to establish this framework.

According to early estimates, the full implementation of action planned under SAVE should result in final energy savings of 100 Mtoe per year, i.e. a reduction of 12% in final energy consumption in the year 2010 (scenario I of the 2010 study). In terms of primary energy, the energy savings which can be achieved would be some 160 Mtoe per year. The corresponding reduction in CO₂ emissions resulting from this energy saving is estimated at more than 500 million tonnes per year, or a reduction of more than 15% of estimated emissions in scenario I of the 2010 study.

The Council is called upon to approve the attached proposal for a Council Decision concerning the promotion of energy efficiency in the European Community.

ANNEX I

CHRONOLOGY OF LEGAL ACTIONS AND STANDARDS

- Second half 1990:
- Heat generators standards
 - Building certification
 - Heat metering on the basis of actual consumption.
- First half 1991:
- Third party financing in the public sector
 - Labelling of domestic appliances
 - Periodic inspection of heat generators:
- Second half 1991:
- Building insulation standards
 - Energy audits/energy managers
 - Voluntary agreements with manufacturers of domestic appliances.
- First half 1992:
- Combined heat and power production (cogeneration)
 - Minimum standards for certain domestic appliances.
- Second half 1992:
- Motor vehicle performance requirements.
 - Minimum standards for other domestic appliances

SPECIFIC ACTION UNDER SAVE PROGRAMME

1. Technical evaluations

- a) preparation of directives
- b) CEN/CENELEC standardisation

2. Support Programme

- a) Training activities
- b) Pilot Sectoral actions in :
 - third party financing
 - least cost planning
 - cogeneration
 - targetting and monitoring
- c) Electricity end-use programme

3. Information Programme

- a) Newsletter
- b) Databases
- c) Third Party Financing Information Network
- d) Actions with countries outside the Community

**Proposal for a
COUNCIL DECISION
concerning the promotion of energy efficiency
in the Community**

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,
and in particular Article 235 thereof,

Having regard to the proposal from the Commission,⁽¹⁾

Having regard to the opinion of the European Parliament,⁽²⁾

Having regard to the opinion of the Economic and Social Committee,⁽³⁾

Whereas in its Resolution of 15 January 1985 on the improvement of energy saving programmes in the Member States⁽⁴⁾, the Council invited the latter to pursue and, where necessary, increase their efforts to promote the more rational use of energy by the further development of integrated energy saving policies;

(1) OJ No

(2) OJ No

(3) OJ No

(4) OJ No C 20, 22.1.1985, p. 29.

Whereas in its Resolution of 16 September 1986⁽⁵⁾ the Council considered that the energy policy of the Community and the Member States must endeavour to achieve the objective of more secure conditions of supply through a vigorous policy for energy savings and the rational use of energy; whereas in that Resolution the Council adopted for the Community the objective of achieving a more rational use of energy through improved energy efficiency and decided that the efficiency of final demand should be improved by at least 20% by 1995;

Whereas Article 130r of the Treaty requires a prudent and rational utilization of natural resources and the rational use of energy is one of the principal means by which this objective can be respected and environmental pollution reduced;

Whereas the Commission in its Communication to the Council of 3 May 1988 on the principal results of the review of Member States' energy policies⁽⁶⁾ noted that the Community would fail to achieve the energy efficiency objective of a further 20% saving if vigorous measures were not adopted;

Whereas the promotion of energy efficiency in all regions of the European Community will help to reinforce the economic and social development of the Community as a whole, an objective which, according to Article 130r of the Treaty, should be taken into account when implementing common policies and the internal market;

Whereas the Commission in its Communication to the Council of 8 February 1990 on energy and the environment⁽⁷⁾ stressed that energy efficiency had to be increased to reduce the negative impact of energy on the environment;

(5) OJ No C 241, 25.9.1986, p. 1.

(6) COM(88) 174 final, 3.5.1988.

(7) COM(89) 369 final, 8.2.1990.

Whereas improved energy efficiency will have a positive impact on both the security of energy supplies and the environment, and as these are by nature of global significance, a high level of international cooperation is desirable to produce the most positive results;

Whereas the Council in its Decision 89/364/EEC established a Community action programme for improving the efficiency of electricity use;⁽⁸⁾

Whereas the Treaty makes no provision for powers other than those of Article 235 for the adoption of this Decision,

HAS ADOPTED THIS DECISION:

Article 1

The Community shall, under the conditions laid down in this Decision, support a series of energy efficiency initiatives within the context of the programme entitled SAVE (Specific Actions for Vigorous Energy Efficiency).

The cost to the Community of giving effect to the actions established by this Decision shall be determined annually by the budgetary authority.

Article 2

Three categories of action on energy efficiency shall be financed under the SAVE programme, namely:

- (a) technical evaluations for gathering the data needed for defining technical standards or specifications;

(8) OJ No L 157, 9.6.1989, p. 32-34.

(b) measures to support the Member States' initiatives for extending or creating infrastructures concerned with energy saving. These initiatives include:

- training and information activities with regard to energy efficiency at regional level;
- sectoral pilot measures;
- measures to implement the programme for improving the efficiency of electricity use adopted by Decision 89/364/EEC.

(c) the creation of an information network aimed at promoting better coordination between national, Community and international activities through the establishment of appropriate means for exchanging information and at evaluating the impact of the various measures provided for in this Article.

Article 3

1. All costs incurred by the action referred to in point (a) of Article 2 shall be borne by the Community.
2. The level of Community support for the action referred to in points (b) and (c) of Article 2 shall be between 30 and 50% of its total cost. The balance may be made up from either government or private funding or by a combination of both. In exceptional and justifiable cases, Community funding may exceed the 50% limit.

Article 4

1. The Commission shall establish guidelines annually for the support measures referred to in point (b) of Article 2.

2. The proposed initiatives referred to in point (b) of Article 2 shall be presented annually by the Member States to the Commission, which shall decide on the level and conditions of Community funding according to the procedure referred to in Article 6.

Article 5

1. The Commission shall be responsible for the implementation of the programme.
2. The Commission shall be assisted by an advisory committee, hereinafter referred to as the Committee, composed of the representatives of the Member States and chaired by the representative of the Commission.

Article 6

As regards the measures referred to in point (b) of Article 2, the representative of the Commission shall submit to the Committee a draft of the measures to be taken. The Committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter, if necessary by taking a vote.

The opinion shall be recorded in the minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the Committee. It shall inform the Committee of the manner in which its opinion has been taken into account.

Article 7

The Member States shall nominate national or regional bodies which shall be responsible for implementing the initiatives referred to in point (b) of Article 2. The Commission shall sign contracts with the nominated bodies relating to the support measures.

Article 8

Three years after the entry into force of this programme and also at its expiry, the Commission shall present to the European Parliament and the Council, with a view to evaluating the results obtained, a report on the application of the present Decision and on the coherence of national and Community action.

Article 9

This Decision shall apply from 1 January 1991 to 31 December 1995.

Article 10

This Decision is addressed to the Member States.

Done at Brussels,

For the Council

FINANCIAL STATEMENT

1. BUDGET HEADING AND TITLE

- B 4-1031* Actions for the Rational Use of Energy-SAVE
- B 4.105 Studies in the Energy Sector
- A -2511 Committee Meetings (Advisory Committee)

2. LEGAL BASE

Article 235 of the Treaty.

3. OBJECTIVES AND DESCRIPTION

See Communication to the Council.

4. FINANCIAL IMPLICATIONS

Amounts deemed necessary in MioECU

Programme implementation 35

Indicative multiannual schedules

in Mio ECU	1991	1992	1993	1994	1995	TOTAL
Commitments	4,5	6,5	8	8	8	35
Payments	3	6	8	9	9	35

The definitive yearly amounts will be determined by the budgetary authority in accordance with the financial perspectives for the period 1991-1992 (annexed to the Interinstitutional Agreement of 29 June 1988) and with subsequent financial perspectives which may be adopted for 1993, 1994 and 1995.

* Including the former Budget line B 4-106 since the action to be financed under this line will be incorporated in SAVE.

5. STAFF AND ADMINISTRATIVE EXPENDITURE

In addition to the principal means of action which are contracts, assistance will be required with the operation of the programme. This will not have any direct staffing implications but will require a contract with a consultant.

Studies and other measures according to Article 2 para 1a) will be partly financed under Budget line B4-105.

The definitive yearly amounts will be fixed in accordance with the rules governing the 'mini-budgets' adopted by the Commission on 22.5.1990.

6. TYPES OF CONTROL

Control will be exercised by :

- a committee composed of experts nominated by Member States
- the services of the DG responsible for the execution of the programme, possibly assisted by independent experts
- the Commission's Financial Controller.

In accordance with Article 2 of the Financial Regulations², the use of appropriations will be subject to analyses of cost-effectiveness and the realisation of quantified objectives will be monitored.

External audits may be carried out by the Court of Auditors in accordance with the Treaty.

² Financial Regulations of 21 December 1977, as last amended by Regulation 610/90 of 13 March 1990.

SAVE -BUDGETARY ASPECTS								Existing	New
SUPPORT PROGRAMMES	Unit Cost ECU	No./Year	Total No.	Total Cost MECU	% Support	Commission Commitment	Budget Line	Budget Line	
Training Activities	100	80000	400000	40	33,3	13		B4-1031	
Pilot Sectoral Actions									
a) Least cost planning	300000	3	15	4,5	50	2,25			
b) Cogeneration	20000	15	75	1,5	50	0,75			
c) Targetting & Monitoring	10000	25	125	1,25	50	0,625		B4-1031	
d) Sectoral Audits	30000	4	20	0,6	50	0,3			
e) Transport Actions	50000	9	45	2,25	50	1,125			
f) European Network for Third Party Financing				4,15	100	4,15		B4-1031	
Total				14,25	50/100	9,2			
Electricity Programme	as yet unspecified			4	100	4	B4-106		
COMMISSION ACTIONS									
Standardisation	150000	2-Mar	12	1,8	100	1,8			
Customer information	350000	/annum		1,75	100	1,75			
Voluntary Agreements				0,1	100	0,1			
Technical building codes				0,2	100	0,2			
Evaluation obstacles to cogeneration				0,05	100	0,05		B4-1031	
fiscal treatment of energy efficiency				0,25	100	0,25			
transport studies				0,5	100	0,5			
Energy efficiency in industry				0,35	100	0,35			
Total				5	100	5			
INFORMATION NETWORK									
Databases/Software/Other Tools				1,5	100	1,5			
Seminars, Conferences				0,8	100	0,8		B4-1031	
Newsletter	1,6	187500	937500	1,5	100	1,5			
Total				3,8	100	3,8			
TOTAL PROGRAMME						35		B4-1031	

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