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THIRD REPORT ON THE COMMUNITY'S PROGRAMME FOR ENERGY SAVING

(Communication by the Commission to the Council)

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THIRD REPORT ON THE COMMUNITY'S PROGRAMME

FOR ENERGY SAVING

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THIRD REPORT ON THE COMMUNITY'S PROGRAMME
FOR ENERGY SAVING

1. The challenge today

1.1. For the Community as a whole, it is estimated that energy savings equivalent to about 8% of total primary energy requirements, or the equivalent of 70 to 80 million tonnes of oil, were achieved in the year 1977. But although the long-term potential for further energy savings is thought to be very large, doubts grew as to whether energy savings could be obtained at the same rate in the future. With the return to an apparent abundance and declining real prices, there were even some who doubted if they were really necessary.

In 1978, for the first time since the 1973 crisis, a close link between economic growth (2.8%) and increases in energy consumption (2.3%) re-established itself. A similar link was re-established for 1979.

1.2. Recent events have modified this environment: consumers are now facing shortages and rising prices. There is therefore a renewed incentive to reduce energy requirements, but the margins for eliminating waste are now smaller than they were in 1974. Future savings will increasingly require investment in new equipment or buildings, or retrofitting the old, and more energy conscious behaviour from both investors and consumers.

1.3. It is now understood that sustained economic growth depends upon an efficient and rational production and use of energy. For those countries like Ireland and Italy where industrialization and levels of welfare are still less developed than in other parts of the Community, promoting a dissociation between economic growth and energy requirements is particularly important, since economic and social trends are generally favouring an increase in the energy intensity of economic activity. For those countries where industrial restructuring and the growth of the service sector are tending to encourage a dissociation between economic growth and energy consumption, the task must be to consolidate what has already been achieved, and to advance towards an even greater dissociation. The European Council meeting in

Paris on 12 and 13 March 1979 recognized this by underlining the need for vigorous new efforts to save energy, and for an equivalence of effort from all Member States.

- 1.4. A number of short-term actions are necessary. However, many of these actions, by their very nature, can only be applied temporarily and will not induce energy saving on a permanent basis. Therefore, while taking these immediate actions, we must not forget the longer term.
- 1.5. This report addresses itself to the longer term issues. It assesses the measures taken until now by Member States and at the Community level. It explores the main policy options for future action. Finally, it examines possible new lines of action for the Community.
- 1.6. It is the third in a series of reports on the Community's programme for the rational use of energy, foreseen in the Council's resolution of 17 December 1974¹⁾. The first report was published in January 1976²⁾ and the second report in March 1977³⁾.

2. An overview of Member States' programmes for energy saving

- 2.1. During the past three years, Member States have been putting into place the basic measures and procedures in their energy conservation programmes. Annex 1 shows the progress made since 1975 in introducing some of the most important specific measures for energy saving. The Dutch, Danish, German, Italian and French programmes each have a substantial, though not comprehensive coverage. Belgium, Luxembourg, Italy and Ireland have not made equivalent progress to that of other Member States since 1975.

This picture needs to be completed by a table showing the public funds committed to energy saving in 1978. It is difficult to give accurate figures, because many programmes have multiple objectives, of which energy saving is just one, and because the budgetary implications of

1) Council Resolution of 17 December 1974 concerning a Community action programme for the rational use of energy.

2) First Report on the Community Programme for the Rational Use of Energy. Brussels, January 1976.

3) Second Report on the Programme for the Rational Use of Energy. Brussels, March 1977.

tax credits are hard to estimate accurately. Annex 2 gives best estimates for 1978.

- 2.2. In addition to specific measures of government policy, energy prices have had an important influence on energy saving. They can strengthen the effect of specific measures, or compensate, to a degree, for their absence. On the other hand, inadequate pricing policies can act to counterbalance, or even undermine, vigorous programmes of specific measures.

The Commission's services have made an analysis of electricity and gas tariffs and discussed the results with the Energy Committee of the European Communities. Further work is needed to refine the data, and to include oil products in the comparison, before firm conclusions are drawn. Nevertheless, it is certain that a significant number of cases are identified where prices have apparently declined in real terms, and where promotional tariffs (e.g. decreasing block rates) are still offered.

3. The European Community's energy saving programme

The European Community's energy saving programme has developed the following main lines of activity.

- 3.1. The first activity is that of a regular review of Member States' energy programmes and objectives, in a framework of general guidelines and specific measures, recommendations or directives, adopted by the Council of Ministers. A full listing of these guidelines and specific measures is given in Annex 4.
- 3.2. Secondly, the Commission pursues studies into a number of themes of general interest to all Member States. The Commission has begun fact-finding studies into energy prices in the market, and reports have been submitted to the Energy Committee. It prepares short and long-term market forecasts, and scenarios, which examine in detail the evolution of energy demand and explore the margins of choice.

It is sponsoring a study entitled "Low Energy Growth Societies", to examine ways in which society's economic, social and environmental goals might be achieved without large increases in primary energy. A first report is expected in June 1979.

- 3.3. Thirdly, the Community has adopted a programme to promote the use of best-practice technology and design, and to develop a market for energy saving equipment and materials at a European level, through the granting of financial aids to demonstration projects in the field of energy saving. As part of the management of this scheme, a close co-ordination is maintained between this and national schemes.
- 3.4. In addition, the groups of experts chaired by the Commission's services are beginning to build up comparable estimates of the cost-effectiveness of specific measures to save energy in buildings, selected industries, domestic appliances and motor vehicles.
- 3.5. In the related field of research and development, the Commission's services manage a Community research and development programme in energy saving, assisted by an advisory group of national experts. A first four-year programme is now nearing completion and a second four-year programme has been proposed to the Council of Ministers¹⁾. The Commission's services also organize regular meetings to encourage better co-ordination between national programmes, and to compare priorities and results.
- 3.6. Finally, the Commission intends to support investment in energy saving through Community sources of loan finance, eventually combined with grant, interest rebate or tax credit schemes operated by Member States: for example, it seems likely that the first series of projects to be supported by the New Financial Instrument (Ortoli facility) of the Community will include energy saving projects.

1) COM (78) 388 final

3.7. The Council of Ministers has now taken decisions to deal with all proposals made by the Commission in the context of the programme of work begun in 1977¹⁾. Thus, during the past two years, there has been good progress made in developing the Community's programme, but now it is an appropriate moment to decide upon such changes of emphasis and direction as seem necessary. This should be done with regard to the principal issues for energy saving policy in the next few years.

4. Principal issues for energy saving policy

At the horizon 2000 to 2020, it is accepted that the technical potential for saving energy is very large. Studies in the United Kingdom, France, Germany and elsewhere have shown that the generalized use of today's best-practice and cost-effective technology and design could save, by these dates:

- . 15 to 35% of primary end-use requirements in industry;
- . 20 to 35% of primary end-use requirements in transport;
- . up to 50% of primary end-use requirements in the domestic and tertiary sectors.

Energy savings due to broader economic and social forces at work - for example the restructuration of industry and the growth of the service sector - are also expected to be important, but are difficult to estimate.

However, energy savings in the next few years will depend not on the long-term potential, but on the propensity of firms and households to adapt to current market conditions, aided by government measures to encourage energy saving.

This section discusses more generally the propensity of firms and households to adapt to changing market conditions. The principal issues are:

- energy pricing practices;

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1) COM (77) 39 final "An intensification of the Community's programme for saving energy".

- the rate of investment in new energy-efficient equipment and buildings, or in retrofitting the existing;
- the development of energy conservation as a business opportunity;
- the problem of standards and legislative requirements;
- information and education.

4.1. Energy pricing practices

Energy prices play a key role in energy saving policy. Inappropriate pricing practices will undermine the impact of specific measures to save energy. To ensure that energy prices give correct signals to energy consumers and to investors in energy saving alike, energy prices should reflect the following principles:

- (a) Taxation on energy should be maintained or even increased to reflect the scarcity of energy as a factor of production;
- (b) Energy prices should be linked to the long run costs of replacing and developing energy resources;
- (c) Energy prices in the market should be subject to the greatest possible degree of transparency. Publicity about energy prices, and the costs and consumption of equipment using energy, should be developed as widely as possible.

Special attention should be given to examining cases where energy pricing practices encourage increased consumption, for example by offering promotional tariffs.

In some Member States, many energy prices are subject to approval by the government or by a regulatory agency. The practice is generally to keep energy prices down by this means, because of wider economic and social considerations, sometimes for extended periods. Thereafter a sudden, inflationary adjustment may become necessary. If energy prices cannot be deregulated, energy policy considerations, especially energy saving, must at least be given their proper weighting.

The impact of price increases is sometimes dulled by the automatic or semi-automatic indexing of wage and salary increases to energy prices through the retail price index, and by the ability to offset some energy purchases against tax (for example, the company car). The

importance of these effects, and in particular the relationship between energy price increases and inflation, should be studied further. In general, the relationship between energy prices and consumer and investor behaviour is not well understood and would repay intensive study.

4.2. Investment

4.2.1. As is well known, investment in energy saving in industry encounters a number of obstacles:

- management sometimes applies stricter criteria to energy "cost-cutting" investments than to reducing labour costs (which represent a much higher share of total manufacturing costs) or to "market development" investments, even though the effect on profitability is directly comparable;
- in most industries, investment of all kinds is not undertaken unless there are short pay-back periods. In contrast, the energy industry is used to considering long pay-back periods when evaluating investments in energy supply;
- amongst small and medium-sized businesses especially, there is still a lack of knowledge about energy saving technologies and designs. There is no simple or comprehensive source of information to guide engineers and managers towards the best practice;
- experience has shown that, unless accompanied by proper training and supervision, many of the theoretical benefits of investment in energy saving are lost.

For these reasons, financial incentives are required to encourage investment in energy saving in industry. Action to tackle the above obstacles directly is however important, to ensure that the best use is made of public funds.

4.2.2. Investment in energy saving in commercial and industrial buildings encounters many of the same obstacles as investment in industry, but with the added problem that, for the developer

or owner, the all important factor is often the "rentability" of his property. It seems to be the case that, in Europe, the running costs of the building are often treated as a relatively minor issue by the developer and renter alike. The importance of running costs, and hence of energy consumption, must be better understood by the market. The public sector can do much by setting an example, both as the promoter, owner and user of many buildings, and as an important influence in the private rental market.

With careful design and by avoiding excessive lighting, mechanically assisted ventilation is normally sufficient for summer cooling in temperate climates, and air conditioning can be avoided in all but exceptional circumstances.

Wide publicity for the best-practice - for example, recent office buildings with virtually all their heating requirements supplied from free heat gains - can also promote greater awareness of running costs.

- 4.2.3. Investment in energy saving in the home once again encounters difficulties arising from short time horizons, and a bias in favour of current rather than capital expenditure. There are problems of access to finance on reasonable terms, of the availability of cheap and reliable expertise, and in the case of rented property, of a separation of motivation, responsibility and benefit. Each of these obstacles must be tackled.

But the main problem is often thought to be that of cost-effectiveness especially in the case of existing buildings. As a number of Member States have now embarked upon major programmes of aid for the retrofitting of existing homes, a sound discussion of the effectiveness of such programmes, based on the lessons of experience, will be increasingly possible.

Full advantage must be taken of the opportunity provided by urban renewal programmes, or programmes to alleviate rural poverty. If substantial renovation is required, the additional costs of improvements to thermal insulation and to heating systems which properly reflect the useful life of the building after renovation, will be small.

When investment is principally for energy saving, there are still strong arguments for substantial public aids. If measures are carefully adapted to the specific circumstances of each home, cost-effective measures will be identified. It is, however, essential that measures are properly adapted to each situation; hence the importance of cheap and reliable expertise.

The demand for higher standards of comfort with rising standards of living, risks being a major source of growth in energy requirements in the medium term. At a rate of retrofitting 3% of the worst stock a year, it will probably take ten to fifteen years in many Member States before the average energy performance in homes is adapted even to today's price of energy.

4.3. Energy saving as a business opportunity

One of the major difficulties for government is that it cannot conduct a dialogue on policy with an energy saving industry in the same way as it does with the energy supply industry. Government could encourage the development of an energy saving industry for example by sponsoring exhibitions and trade fairs on this theme and by bringing the relevant industries together in working parties with government. In fact, a number of companies are already exploring energy saving as a business opportunity - in particular some of the oil majors, insulation and glass manufacturers and information and control systems manufacturers - but a balanced development will require strong participation from small and medium-sized businesses too.

A less-fragmented energy saving industry would also be of help to its potential customers. In the home for example, it is difficult for the householder to decide between the conflicting claims of sellers of insulation, heating controls, cavity fill and double-glazing. It would be better if he could turn to a company which was not selling this or that individual product, but a credible total service.

It is important to promote the education and training of distributors and tradesmen, to bring them up to a level of expertise commensurate with the market which is now developing. In France, catalogues of energy-saving equipment, classified in decreasing order of cost-effectiveness, are being published. In a number of Member States, steps have also been taken to involve the energy supply industries - the gas and electricity utilities in particular - in offering services and expertise to industry and the home. In the United States, utilities are now required to offer to their customers an advice and assistance service, including, if requested, assistance in obtaining the necessary loan finance and identifying suitable contractors. There have been occasions where state regulatory agencies have refused applications from utilities for tariff increases until, in their view, satisfactory energy saving programmes were in operation.

Banks could be encouraged to pay more attention to energy saving when evaluating loans to firms or households, and to undertake a more general development of leasing schemes for energy-saving equipment.

Finally, the rapid introduction of sophisticated but cheap new measurement and control systems, and the generalized use of information systems, could be an important aid to energy saving quite apart from the wider considerations of industrial policy. They can provide a precise control and monitoring function, and improve the human beings' interaction with buildings and equipment. Software used as design aids can facilitate the acceptance of legislative standards for energy performance.

4.4. Standards and legislative requirements

4.4.1. Mandatory performance standards are accepted as being necessary for new buildings. However, because of our limited understanding of the factors affecting the thermal performance of buildings - particularly the human factors - and of possible side effects from very high standards, mandatory standards in the European Community (with the exception of Germany and Denmark) are still set at prudent levels.

It will be many years before the statistical and theoretical basis can exist for setting high performance standards by calculation. In the immediate future, higher standards can best be set on the basis of the empirical observation that numerous examples already exist of buildings with standards much higher than the legal minimum, that operate successfully and do not cost more (either on a first cost or on a life cycle basis) than the average building. The first priority must be to ensure that every Member State has mandatory minimum performance standards in force for new buildings in residential and office use - Belgium and Ireland must give particular attention to this. Thereafter a commitment can be made to gradually increase mandatory standards until the level of the best existing practice is reached, or until a major industrial or other constraint is reached which requires a pause for reflection. The Community should now examine regular and predictable increases in required standards, in place of infrequent large changes with the disruption they involve.

4.4.2. In the field of transport, and more especially motor vehicles, the situation is rather different. However, the transport sector will be one of the main growth sectors in energy consumption for some years to come, though in the longer term saturation effects are expected. Since there is no substitute in sight in the near future for the petrol or diesel-powered internal combustion engine, the growth in energy requirements will be for oil products or expensive synthetic fuels. Shortages in liquid fuels risk being particularly acute by the end of this century. As cars and light vans make up by far the largest proportion of road vehicles, activity has been concentrated on them.

The aim here is to promote the purchase and use of fuel-conservative vehicles. As the recent past has already shown, fuel can be saved by using engines which are of smaller capacity, or which consume their fuel more efficiently through technical design improvements, or preferably by a combination of both.

4.4.2.1. Another contribution towards fuel saving would be the promotion of diesel-engined cars and vans which consume less fuel than similar petrol-engined models, particularly in congested traffic. Similarly the possibility of encouraging the use of liquified petroleum gas (LPG) in cars and vans needs to be investigated more thoroughly, in view of the expected increase in supply of that fuel. However, further work is needed to determine the implications for environmental pollution of the choice between diesel, LPG, and petrol-engined cars and vans.

4.4.2.2. The use of fiscal measures and therefore the price mechanism has been investigated by a special group of experts. The evidence to date is that price elasticities for the purchase and use of motor vehicles are small. In such a situation fuel and vehicle taxes, which in some cases are already high, would have to be increased very substantially to obtain significant fuel savings; such increases might become politically difficult to justify and implement. However, as one of the main reasons for the low price elasticity appears to be the vehicle owner's lack of perception of the real costs of using his car, efforts should be devoted to increasing that perception.

In the meantime, in pursuing the objective of lower fuel consumption, taxes on vehicles and excise taxes on fuels should continue to be used in combination in order to at least maintain the cost of motoring in real terms. If perception of costs can be increased, such measures would have greater impact at each level. Moreover, to the extent that diesel-engined vehicles are to be encouraged, taxation on such vehicles and their fuel will need to be at least consistent and possibly more favourable than for petrol-driven vehicles; similarly, fiscal treatment of LPG fuel and vehicles may need reappraisal. An interim report on fiscal measures will be available by mid-1979; and it is intended to pursue further the analysis of the effectiveness and implications of car and fuel taxation.

4.4.2.3. Turning towards measures affecting the motor industry itself, the United States has adopted mandatory fuel consumption standards in order to encourage an accelerated improvement in fuel economy. The question arises whether there are valid arguments in favour of the European Community doing the same.

The Commission does not believe such a step would be justified until other measures have had a chance to prove themselves, because:

- fuel efficiency is an important selling point and European vehicles generally compare well with their competitors in world markets today;
- European manufacturers seem to be well aware of the need, in competitive markets, to obtain further improvements in fuel efficiency, and it is known that important development efforts are in progress.

In the long run, however, stringent mandatory measures can only be avoided if the industry can show significant achievements as a result of its own efforts. In this situation, both government and industry will benefit from the negotiation of voluntary but realistic, indicative targets in fuel efficiency which take account of energy saving policy, of the rapid improvement in fuel efficiencies that competitors in the United States and elsewhere expect to be achieving, and of possible developments in legislation to protect the environment.

To enable proper comparisons during the monitoring of such targets, an early agreement is needed at Community level on a standard way of measuring fuel consumption, with regard to the characteristics of use of each kind of vehicle. Two Member States (France and the United Kingdom) have already adopted standard measurement methods developed by UNECE¹⁾ at Geneva, as the basis for calculation. The Federal Republic of Germany intends to encourage the use of the same method on a voluntary basis. These matters are being examined by the Group of experts

1) Groupe de Rapporteurs Pollution atmosphérique (Rapporteurs Group on Atmospheric Pollution)

on "Motor Vehicles".

- 4.4.3. Under the heading of legislative requirements, this section should conclude with a few brief remarks concerning the rational production and use of heat and power.

Three important legislative obstacles need to be considered. First, the statutory duties placed on many utilities can impede the rational production and use of heat and power. Thus for example, electricity utilities often have a statutory requirement which is, in some form or other, to meet the demand for electricity at least cost.

Secondly, when distribution networks and the production facilities are under unified ownership, this can create a situation in which every "outside" producer who wishes to interact with the distribution network is seen, essentially, as a factor disturbing the efficient management of the system, and treated accordingly.

Thirdly, the initial capital cost and planning implications of district heating schemes mean that their conception and installation is best done in the closest co-ordination with urban planning procedures. In those countries where urban planning authorities do not have a tradition of involving themselves in district heating schemes, or are expressly prevented from doing so by law, an important obstacle is created to the development of such schemes.

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4.5. Information and education

Information and education reinforce price incentives to save energy, and in the longer term, can help to promote social values conducive to an energy-conserving society.

Most Member States have supported important programmes of publicity about energy saving. It is important, however, to sustain the effort, since the lesson is quickly unlearned unless constantly repeated. More discipline has also to be observed in public and privately-sponsored publicity tending to encourage energy consumption, if this is not to undermine efforts to encourage energy-conscious behaviour.

More fundamentally, greater efforts should now be made in the schools to educate future generations to be more energy conscious at home as at work; and in universities and technical colleges, to re-educate those in professions and trades to adopt the multi-disciplinary approach which is necessary.

5. New lines of action for the Community's energy saving programme

Much that has been described in the previous section must be the responsibility of Member States' own programmes. However, it is in the common interest that Member States all contribute to the achievement of policy guidelines established for the Community as a whole. Co-ordination at Community level and, where necessary, specific Community actions, can contribute to better results than Member States' programmes. In some cases, it can avoid conflicts between Member States' objectives or between Member States' measures and other Community objectives, such as the free circulation of goods and services and the conditions of competition.

The Community programme should include:

- commitments taken by the Member States collectively, including monitoring of results;
- co-ordination of Member States' policies, exchanges of information and experience, and the rapid dissemination throughout the Community of the best practices;
- specific Community actions.

5.1. Energy saving objectives

5.1.1. Targets for 1985 have been established and confirmed on various occasions by the Council of Ministers or the European Council. New medium-term objectives should be adopted for 1990. The Commission proposes the objective of reducing the ratio between the rate of growth in gross energy consumption and the rate of economic growth progressively below 0.7 by 1990.

Taken together with the objective already adopted by the European Council in July 1978 to limit the above ratio to 0.8 by 1985, this could mean, if the same rate of economic growth is assumed as that underlying forecasts made by the Member States, that energy consumption in the Community would be some 20 m.t.o.e. less than is now forecast for 1985, and at least 80 m.t.o.e. below what is now forecast for 1990.

Quantified sector targets, adopted on a Community basis, are not proposed at this stage because of the differences between Member States' structures of energy consumption, and the relative lack of experience in making statistical estimates of individual contributions to the achievement of Community targets. It is intended to re-examine this idea later.

5.1.2. Medium and long-term energy saving targets only make sense if they can be translated into immediate action. The aim of the Community programme must be to maintain a steady progress, each year building on the year before. To reach the objectives established for 1985, average annual savings of more than 1% of total primary energy requirements should be achieved on a permanent basis.

Therefore a commitment should be made by all Member States to adopt, by 1980, energy saving programmes with comparable effects, with due regard for national differences.

Appropriate energy pricing practices are an essential part of such energy saving programmes. Therefore, it is also proposed that

a regular review of Member States' energy pricing practices should be instituted, based on the considerations developed in section 4.1. above.

5.1.3. The above commitment should be adopted formally by the Council of Ministers. It would constitute a general guideline for Member States, but each country is free to adopt the balance between sectors and between policy instruments which best suits its needs and situation. A possible outline of a basic energy saving programme is given in Annex 3.

Many of the measures included in the basic energy saving programme are already covered by initiatives (recommendations or directives) approved by the Council of Ministers. However, the degree of implementation differs considerably between Member States.

5.1.4. A regular and detailed series of statistical indicators should also be developed, as a tool for the evaluation of progress towards common targets. It is recognized that such indicators should always be interpreted with great caution, especially when international comparisons are involved. They remain, nevertheless, a valuable basis for discussion.

5.2. Co-ordination and exchange of information

All of the Member States' energy saving programmes, even those that are more advanced, are really still in the making. The exchange of information can not only enable a better understanding of the degree of convergence of national policies, but, equally important, can also provide a valuable pointer to difficulties and ways to resolve them, drawing on practical experience.

Co-ordination should, however, be directed to areas where a common analysis can help the convergence of Member States' policies and produce significant benefits for the Community as a whole.

The Commission intends that the co-ordination and exchange of information should be concentrated on fundamental issues, such as those described in section 4 of this paper, that are of concern to many or all Member States.

- 5.2.1. A whole range of Community recommendations cover energy savings in buildings. They include procedures for review. These procedures will provide the appropriate framework on which to base the co-ordination and exchange of information at the level of the Community. The Commission's services will develop their approach in this field with regard to the views expressed earlier in this paper, and to the texts of the recommendations adopted by the Council of Ministers.
- 5.2.2. In the industrial field a comparative analysis will be carried out of the experience in operation of the different national schemes, offering various forms of incentive for energy saving investments. This analysis should help to identify the most cost-effective measures and could help public authorities allocate scarce public funds.
- 5.2.3. Furthermore the feasibility of developing a European technology data bank will be examined, pooling at European level the experiences obtained by Member States in the application of energy saving technology and design to both buildings and selected equipment. The information could be available as a public service to architects, engineers, and other interested professions and businesses. However, it would be an unmanageable task if tackled on all fronts simultaneously. In the beginning it will be best to restrict the enquiry to new and existing buildings in residential and office use, and to the results of national and Community demonstration programmes in the field of energy saving.
- 5.2.4. As regards the rational production and use of heat and power, the Commission's services will continue their review of Member States' measures with the aid of Member States' experts, in the framework of the recommendation adopted by the Council.

5.3. New specific Community actions

- 5.3.1. There are a number of specific Community actions already in place (see Annex 4) or already foreseen (a new Community R & D programme, a second directive on heat generators, further implementing directives for the labelling of domestic appliances). In this

section, new specific actions at the level of the Community will be proposed.

- 5.3.2. Motor vehicles: There must be close co-ordination between Member States' policies and a certain degree of a common action, since about one-quarter of the automobiles produced in the Community are exported to other Member States, and a further one-quarter or so are exported to Third Countries.

Therefore, discussions should now begin in a Community framework with the automobile industry, taking account of the progress already made in similar discussions conducted by Member States, concerning the fixing of voluntary indicative targets for the fuel consumption of motor cars and light vans. The discussions should be conducted with a view to an early decision on the fixing of such targets.

The work already undertaken by the existing group of experts, to determine an acceptable method for measuring fuel consumption, which takes into account the structure of the European market, will be accelerated. Ongoing work on fiscal aspects should also be completed by mid-1979.

- 5.3.3. Standards: The Commission, with the aid of the Member States, intends to make every effort to accelerate the work of international bodies concerned with measurement standards related to energy consumption. Priority will be given to standards related to the implementation of the directives on heat generators and on information labelling of domestic appliances.

- 5.3.4. Higher standards for new buildings will be examined according to the approach described in section 4.4.1. above.

Basic Energy-saving Measures : Comparison January 1979 with July 1975

	B		D		DK		F		IT		NL		IRL		UK		L	
	75	79	75	79	75	79	75	79	75	79	75	79	75	79	75	79	75	79
A. THERMAL INSULATION																		
1) New Buildings																		
Revised building regulations																		
(compulsory) residential				x	x	x	x		x		x		x		x	x		
industry				x		x		x		x						x		
office	(1)	(1)		x		x		x		x								
other				x		x		x		x								
Regulations for monitoring and control systems in multioccupied buildings								x		x				x				
2) Existing Buildings																		
Publicity campaigns	x			x	x	x	x					x	x	x	x	x		x
Advice centres - grants for expertise						x												
Aids for retrofitting - residential	x		x	x		x	x	x			x	x		x			x	
- industrial						x						x					x	
- other	x										x	x						
Exemplary public buildings programme				x			x							x	x	x		
B. HEATING SYSTEMS																		
Mandatory installation standards				x		x		x	x	x	x						x	
Aids to approved work to improve or replace heating systems				x		x		x	x									
Mandatory control of servicing of heating system	x	x		x				x	x									x
(1) Public buildings only																		

	B		D		DK		F		IT		NL		IRL		UK		L	
	75	79	75	79	75	79	75	79	75	79	75	79	75	79	75	79	75	79
C. TRANSPORT																		
Information campaigns	x		x	x			x	x	x		x	x	x		x			x
Standard mileage tests of fuel use: Control of publicity				x			x	x								x		
D. INDUSTRIAL PROCESSES																		
Information campaigns				x	x	x		x		x		x	x	x	x	x		
Aids for advice and expertise for small and medium-sized businesses				x		x		x				x		x		x		
Aids to support demonstration projects and technical risks				x		x		x				x				x		
Other investment aids	x		x	x	x	x	x	x				x		x	x	x		
E. DOMESTIC APPLIANCES																		
Standard consumption tests: labelling				x				x	x									
F. RATIONAL PRODUCTION AND USE OF HEAT AND POWER																		
Measures to encourage co-operation between public utilities and auto- producers	x	x		x	(2)	(2)		x		x								x
(2) No major initiatives were necessary																		

PUBLIC SECTOR BUDGET 1978: ENERGY SAVING PROGRAMMES

(m EUA)

	B	D	DK	F	I	IRL	L	NL	UK	TOTAL EUR - 9	EEC Budget
1. General Information Campaigns	-	4.4	0.3	2.3	-	0.4	-	1.5	4.2	13.1	-
2. Renovation of existing buildings	-	288	41	0.35	-	-	-	35	35 ⁽³⁾	399.4	-
3. Aids to investment in industry	-	23	29	34	-	-	-	27	8 ⁽³⁾	121	-
4. Demonstration projects	-	20 ⁽¹⁾	5	8	-	-	-	1	3	37	4
5. Research and development	4	33	3	42	10	0.2	-	15	40	147.2	4
6. Other	-	-	-	-	-	-	-	5 ⁽¹⁾	30 ⁽²⁾	35	-
TOTAL	4	368.4	78.3	86.7	10	0.6	-	84.5	120.2	752.7 +	8
Total per toe.e. of gross energy consumption in 1978 (EUA/toe)	0.09	1.37	3.76	0.46	0.07	0.07	-	1.1	0.56	0.79	

(1) Principally CHP, district heating and waste heat.

(2) Principally energy saving in public buildings.

(3) No estimate provided for the value of tax reductions, accelerated depreciation.

Sources: Questionnaire on Member States' energy programmes April 1978.
: Replies to questionnaire circulated by DG IV 25/8/1978.
: Work of groups of experts.

Outline of a basic programme for saving energy,
recommended to every Member State of the European Community

A. Energy pricing practices

Energy pricing practices should reflect the following principles:

- (i) Taxes on energy should be maintained or even increased to reflect the scarcity of energy as a factor of production.
- (ii) Energy prices should be linked to the long run costs of replacing and developing energy resources.
- (iii) Energy prices in the market should be subject to the greatest possible degree of transparency. Publicity about energy prices, and the costs and consumption of equipment using energy should be developed as widely as possible.

B. Specific measures to encourage the rational use of energy

1. Energy saving in the home

- A substantial upward revision in mandatory thermal performance requirements for new buildings and heating systems;
- Regulations to ensure individual metering and billing and control of heating systems in multi-occupied buildings;
- Performance standards and control of servicing of heating systems;
- Publicity campaigns and advice centres for energy saving in the home;
- Financial aids for retrofitting as necessary existing houses, an exemplary programme for dwellings in public ownership;
- Labelling to indicate the energy consumption of domestic appliances.

2. Energy saving in industry

- Requirements for energy audits, especially in industries consuming large volumes of energy;

- Financial aids for advice and expertise for small and medium-sized businesses, publicity campaigns;
- Financial aids, tax credits to support investment to save energy;
- Financial aids to promote the commercialization of new technologies, equipment, designs for energy saving (demonstration projects).

3. Energy saving in offices, commerce

- An exemplary public sector programme;
- Mandatory building codes for new offices;
- Performance standards and control of servicing of heating, cooling and ventilation systems.

4. Energy saving in transport

- Information and publicity campaigns;
- Implementing standard tests of the efficiency of fuel use, and publicity;
- Discussions with industry on voluntary targets for the efficiency of fuel use of new cars.

5. Energy production

- Measures to encourage the rational production and use of heat and power.

6. Information and education

- Sustained programmes of publicity about energy saving;
- Educational programmes in schools, technical colleges and universities and for professional retraining.

7. Sustained efforts in research, development and demonstration

List of Community Guidelines and Specific Measures
already adopted in the field of Energy Saving

A. GUIDELINES

Conclusions of the meeting of Heads of State and of Government of the European Community, Paris 12-13 March 1979

Conclusions of the meeting of Heads of State and of Government of the European Community, Bremen 6 and 7 July 1978

O.J. C 289/1 9.12.1975

Council Resolution concerning the fixing of a short-term objective for energy savings in 1976/7

O.J. C 153/9 9.7.1975

Council Resolution concerning the fixing of a short-term objective for reducing oil consumption

O.J. C 153/5 9.7.1975

Council Resolution of 17 December 1974 on a Community action programme on the rational utilization of energy

B. SPECIFIC MEASURES

O.J.

Council Directive of 14 May 1979 on the indication by labelling of the energy consumption of household appliances

O.J.

Council Directive of 14 May 1979 applying to electric ovens directive 79/ /EEC on the indication by labelling of the energy consumption of household appliances

O.J. L 37, 79/167/ECSC, EEC, Euratom

Council Recommendation of 5 February 1979, on the reduction of energy requirements for buildings in the Community

O.J. L 158

Council Regulation (EEC) No 1303/78 of June 1978 on the granting of financial support for demonstration projects in the field of energy saving

O.J. L 52, 78/170/EEC

Council Directive of 13 February 1978 on the performance of heat generators for space heating and the production of hot water in new or existing non-industrial buildings and on the insulation of heat and domestic hot water distribution in new non-industrial buildings

O.J. L 295, 77/712/EEC

Council Recommendation of 25 October 1977 on the regulating of space heating, the production of domestic hot water and the metering of heat in new buildings

O.J. L 295 77/713/EEC

Council Recommendation of 25 October 1977 on the rational use of energy in industrial undertakings

O.J. L 295, 77/714/EEC

Council Recommendation of 25 October 1977 on the creation in the Member States of advisory bodies or committees to promote combined heat and power production and the exploitation of residual heat

O.J. L 140, 76/492/EEC

Council Recommendation of May 1976 on the rational use of energy by promoting the thermal insulation of buildings

O.J. L 140, 76/493/EEC

Council Recommendation of 4 May 1976 on the rational use of energy in the heating systems of existing buildings

O.J. L 140, 76/494/EEC

Council Recommendation of May 1976 on the rational use, through better habits, of energy consumed by road vehicles

O.J. L 140, 76/495/EEC

Council Recommendation of 4 May 1976 on the rational use of energy in urban passenger transport

O.J. L 140, 76/496/EEC

Council Recommendation of 4 May 1976 on the rational use of energy for electrical household appliances

O.J. L 231/1, 75/510/EEC

Council Decision of 22 August 1975 adopting an energy research and development programme