FIRST PERIODICAL REPORT ON THE COMMUNITY ACTION PROGRAMME FOR THE RATIONAL USE OF ENERGY (PERIOD 1975) AND RECOMMENDATIONS OF THE COUNCIL

COM (75) 691 final

In its resolution of 17 December 1974 on the Community action programme on the rational use of energy, the Council of Ministers adopted the objective of reducing the growth rate in energy consumption throughout the Community, so as to achieve a 15 % lower level of consumption in 1985 than was estimated for that date in the original projections of 1973.

The Council also took note of the procedure proposed by the Commission for implementing the Community action programme on the subject. It asked the Commission to make regular reports on the situation in the Member States and on the achievement of the Community objective and to send it suitable proposals.

This document contains the first of these reports on the rational use of energy for 1975 and the recommendations adopted by the Council.

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I. INTRODUCTION

1. This document constitutes the Commissions's first periodical report on the situation within the Member States and also with regard do the realization of Community objectives in the field of the rational use of energy; the Commission being invited to submit this by the Council Resolution of December 17th, 1974. (1)

This document is the result of the proceedings of the Steering and Co-ordinating Group for the Rational Use of Energy. These proceedings began with the existing situation in each Member State in the sectors of consumption where actions had already commenced (Annex 1); they resulted, on the basis of common criteria, in a number of recommendations which have been submitted to the Council by the Commission (Annex 2).

2. Annex 3 also presents the interim reports of the eight expert groups set up immediately after the Council's decision, whose terms of reference were agreed by the Steering and Co-ordinating Group on the 6th February, and whose working programmes were subsequently adopted after discussion with the Steering and Co-ordinating Group on the 6th March.

These reports form the technico-economic terms of reference for the recommendations mentioned above and provide information and guidelines for future proceedings.

II. FUTURE TREND FOR ENERGY DEMAND IN THE COMMUNITY

3. Table 1 following page shows the total estimates for the Member States for energy consumption in 1980 and 1985. These estimates take into account the results obtained or anticipated by actions taken in view of energy savings on a national level.

^{(1) 0.}J. nº C/153 of 9 July 1975, page 5

Table 1: FORECASTS OF ENERGY CONSUMPTION IN THE COMMUNITY IN 1985

EUROPEAN COMMUNITY	GDP in SUB (1) 10 ⁹	Inland energy consumption in mtoe	Inland consumption per unit of CDP kg.oe/EUR
Actual outcome 1973 (Statistical Office of 1974 the European Communities	835.6 851.4	932•1 914•9	1.12
Sum of Member 1980 States' forecasts (3) 1985	1,034 1,244 (6)	1,140 1,335	1.10
Community's objective (2)	1,328 (5)	1,400 (4)	1.05

Notes:

- (1) At 1973 prices and rates of exchange.
- (2) Including the RUE objective of a 15 % reduction id est 240 million toe.
- (3) Established between March and May 1975.
- (4) If a GDP of 1,328 x 109 is associated with a ratio of inland consumption per unit of GDP of 1.07 kg.oe/EUR, inland consumption would be 1,421 mtoe, an increase of 21 mtoe over the 1985 objective.
- (5) A compound growth rate for GDP of 4 % per annum 1975-1985 underlies the objectives for the Community's energy strategy.
- (6) Equivalent to a compound growth rate of 3.5 per annum 1973-1985.

- 4. The comparison between the total of the Member States' estimates and the objectives of the Community shows that, theoretically, the Member States' estimates almost compared with the Community's objectives, id est a reduction of 15% of energy consumed in 1985 as compared to the estimates made in January 1973.
- 5. For perfect conformity, the growth rate of the Member States' gross domestic product should be somewhat higher (4% per annum was the base line figure for the Community's energy strategy 1975-1985, compared to 3.5% resulting from national forecasts), and the ratio of energy consumption to gross domestic product should be somewhat lower (1.05 instead of 1.07 kg.oe/EUR). But the amount of energy involved, should there be a more rapid rate of economic growth than is presently forecast, with the same ratio of energy consumption to gross domestic product as is now forecast, is approximately 20 mtoe.

III. SURVEY OF THE MEMBER STATES! PROGRAMMES FOR THE RATIONAL USE OF ENERGY

- 6. A thorough survey of the prevailing situation in the Member States in the field of URE actions adopted, or proposed for adoption (outlined in Annex 1) gives rise to a number of remarks shown in paragraphs 7. 8. and 9. below.
- 7. The diversity of the specific measures now in force, or about to come into force, and the differences in emphasis between the various Member States, also reflect the unavoidable pragmatic approach adopted by each Member State during the period immediately following the energy crisis in 1973. Governments had to make use of whatever legal, administrative or financial possibilities already available to them.
- 8. All the Member States' programmes rely heavily on the correct pricing of energy so as to encourage private consumers and enterprises to reduce wastage and to improve the efficiency on energy used. However, if we look back to the beginning of the 1970's and trace the evolution of prices since then, it is only in three countries (in decreasing order:

 Denmark, Germany and France) that the price index for all

fuels and energy consumption is keeping ahead of the general price index. In this case, price increases following the events of 1973 have been less affected by the general price inflation, but a tendency to reduce the gap is noticeable. Elsewhere this gap is minimal and, in some cases, reversed.

Even where a substantial increase in the real cost of energy has been maintained, the long-term reaction of firms and households may well be different from the initial shock effect of very large price increases within a short space of time.

- 9. Finally taking into account the number and significance of the measures adopted or proposed for adoption up to now as the criterion of the progress of each Member State towards the Community's objective of - 15%, the following conclusions arise:
 - a) in September 1975, id est about two years from the beginning of the crisis a third of the measures proposed are still to be adopted;
 - b) at least 40% of the adopted measures concern the field of information aimed at influencing public opinion and industry managers; this means that very few steps have been taken to alter consumption structures and it might be feared that the underlying growth trend in energy consumption could strongly reassert itself once economic activity picks up.
- 10. From the foregoing the conclusion can be drawn that the current situation in the Member States is not yet entirely satisfactory and consequently that the following actions should be undertaken at Community level:
 - i) to make a common "systematic and generalized effort" towards laying the foundations of a common long-term RUE programme, considering the economic structure and growth rate in each Member State, and based on the technico-economic analysis of the main consumption sectors so as to extract the most promising and efficient measures:
 - ii) define the criterions and develop methods best suited to the efficient follow-up and control of the implementation of measures deemed necessary in order to assess the sectorial country by country results during the period between now and the final goal of 1985.

IV. IMMEDIATE ACTION PROPOSED BY THE COMMISSION

- 11. In the light of the above situation, the Commission has submitted to the Council a series of proposals, set out in Annex 2 to this report.
- 12. Because the various working groups have not yet had the opportunity to examine in detail the technical case for more than a very limited number of measures, it was felt right to concentrate, at this stage, on measures where there is already broad technical agreement. Five draft recommendations have been submitted and

adopted (1):

- Council Recommendation of 4 May 1976 on the rational use of energy by promoting the thermal insulation of buildings. (76/492/EEC)
- Council Recommendation of 4 May 1976 on the rational use of energy in heating systems of existing buildings (76/493/EEC)
- Council Recommendation of 4 May 1976 on the rational use, through better driving habits, of energy consumed by road vehicles (76/494/EEC)
- Council Recommendation of 4 May 1976 on the rational use of energy in urban passenger transport (76/495/EEC)
- Council Recommendation of 4 May 1976 on the rational use of energy for electrical household appliances (76/496/EEC)
- 13. Evidently, this list of recommendations could not be exhaustive. When the various working groups have had time to examine in more detail the problems where there are technical difficulties still outstanding, a further series of measures may well be submitted.
- 14. In addition to these specific proposals, three general themes are to be examined in greater depth in Autumn 1975, by the Member States and the Commission.

They are:

the effective organisation of press and advertising campaigns. Drawing upon an exchange of experience

⁽¹⁾ Official Journal No L 140 of 28 May 1976, pages 11 to 19

between Member States on what has already been achieved, it will be possible to determine whether new ideas might be added on a national and Community level. In addition to the action of awakening public opinion, publicity should concentrate itself on specific actions: explaining in detail how they should be undertaken, what they will cost, and who can provide reliable advice and assistance. A delicate balance has to be struck between the responsibility of the State to protect the consumer who is being encouraged to take action, and the need to avoid distortions in free competition between firms supplying services;

- (ii) a review of measures adopted and anticipated results to build up the Community-level statistical basis on policy-making in every Member State in such a way as to facilitate objective comparisons of the evolution of energy consumption and the impact of energy-saving measures. (1)
- (iii) an examination of ways to organize more effectively exchanges of information about technical studies underway in the various Member States, extending perhaps to Community-level co-ordination.
- 15. In addition, the Commission feels that Member governments should consider whether action should not be taken immediately to support private and public sector investment in improving the technical efficiency with which energy is used.

The private market operates, obviously enough, in terms of the limited number of parameters which directly affect the interest of the individual household or enterprise (indeed, these parameters are not always "rational" in the sense understood in economic theory).

These parameters do not necessarily include overall savings and especially those made in investments in the production and distribution of energy, which result from the

⁽¹⁾ The statistical data on energy consumption in the possession of the SOEC for the years preceding 1973 are too aggregated to serve as a basis for the evaluation of the impact of measures taken or planned. Detailed and accurate data are however indispensable to establish a basis for comparison. Within the working group "Energy Statistics", the Commission and the Statistical Office of the European Communities will endeavour to outline a methodology which will allow energy consumption by final utilization to be quantified.

cumulative decisions of all the individual households or enterprises taken together.

Moreoever the reduction of social costs in the field of environmental protection which is often recorded when measures in the field of rational use of energy are adopted, should also be taken into account.

16. A comprehensive approach to energy policy which would reveal how the cost of investments to increase the efficiency with which energy is used, would be compensated by the diminution of the amount of investment required to meet energy demand and environmental protection. If, by lack of savings, that extra quantity of energy were to be supplied for instance from indigenous resources, the investment cost would be very high indeed.

When the work of the vericus expert groups is more edversed.

When the work of the various expert groups is more advanced, a much clearer idea will emerge of the overall cost - effectiveness of the rational use of energy effort, seen in these terms. This will also be an invaluable aid to correct resource allocation in energy policy.

- 17. In the longer term, investment is the only sure way to build a permanent increase in efficiency into the energy system. And this increase in efficiency at the point of consumption is especially vital at a time when heavy investments are made to alter the inherited supply structure.
- 18. For these reasons, the Commission has recently proposed Community-level action to promote investment in the field of the rational use of energy, alongside similar action to accelerate the development of alternative sources of energy. These proposals are set out in the document "Community financing for energy policy" (COM(75)245 final).
- 19. Moreover, in the field of research, the Commission endeavours to bring to a successful issue the indirect energy research and development action programme adopted by the Council in its session of 22 August 1975 of which two specific chapters are devoted to the "Rational Use of Energy" and to the "Technical innovations in the energy sector".

Tableau 2: SALMET INDEKS FOR FORBRUGERPRISE (1) OG INDEKS FOR BRAENDSTOFFER OG ENERGI (2)
GESAMTINDEX DER VERBRAUCHERPREISE (1) UND INDEX DER BRENNSTOFFE UND ENERGIE (2)

GENERAL INDEX OF CONSUMER PRICES (1) AND INDEX OF FUELS AND ENERGY (2)

INDICE DES PRIX A LA CONSOMMATION (1) ET INDICE POUR LES COMBUSTIBLES ET L'ENERGIE (2) INDICE GENERALE DEI PREZZI AL CONSUMO (1) E INDICE DEI COMBUSTIBILI ED ENERGIA (2)

INDICE GENERALE DEI PREZZI AL CONSUMO (1) E INDICE DEI COMBUSTIBILI ED ENERGIA (2)
TOTAAL INDEXCIJFER VAN DE GEZINSCONSUMPTIE (1) EN INDEXCIJFER VAN BRANDSTOFFEN EN ENERGIE (2)

ø 1971 Ø 1972 Ø 1973 1/1975 1970 = 100Ø 1974 4/1975 (1) (2) 105,1 118,8 DEUTSCHLAND 111,2 127.1 131,3 133,6 106.6 113,0 128,2 149,8 158,8 158,0 (1) (2) 105,3 117,7 136,3 FRANCE 120.2 145,9 149,5 156.8 169,2 168.4 114,1 • • • • (1)(2)TTALIA 104,9 110,8 122.8 146.3 163.2 168,0 104,6 104,5 104,7 149,4 172,8 152,9 116.2 125,7 138,0 NEDERLAND 107.6 145,2 149,7 115,3 124,6 145,5 161,0 160,5 107.1 (1) (2) 104,8 110,8 BELCIQUE 117,7 132,6 142,5 146,7 106,8 104.9 111.8 139,7 154,9 155,0 $\binom{1}{2}$ 116,7 104.6 110,1 127,9 134,6 LUXEMBOURG 139,2 108,3 104,9 105,7 122,5 133,2 138,7 UNITED KINGDOM(1) 127.9 148.5 164,0 176,6 161,6 177,0 122,4 143,3 (1)(2)TRELAND 131,8 154,2 • • 226,3(FEB) 131,6 198,7 • • (1) (2) DANMARK 142,1 151,7 153,8 123,3 219.0 130,0 206,0 213.9

Almen Statistik - Eurostat - De Europaeiske Faelleskaber Statistike Kontor
Allgemeine Statistik - Eurostat - Statistisches Amt der Europäischen Gemeinschaften
General Statistics - Eurostat - Statistical Office of the European Communities
Statistiques Générales - Eurostat - Office Statistique des Communautés Européennes
Statistiche Generali - Eurostat - Instituto Statistiche delle Communità Europee
Algemene Statistiek - Eurostat - Bureau voor de Statistiek der Europese Gemeenschappen

Annex 1

COMPARATIVE TABLES OF SPECIFIC MEASURES ADOPTED BY MEMBER STATES
AS PART OF A PROGRAMME FOR THE RATIONAL USE OF ENERGY
SINCE OCTOBER 1973, OR PROPOSED FOR ADOPTION IN THE NEAR FUTURE

(established July 1975)

Content

Measures more properly described as demand restraint are excluded (See 'A Community action programme for the Rational Use of Energy': doc. COM (74) 1950 Final: for definitions).

Symbols

The following symbols are used in the tables:

A: adopted since January 1974,

P: proposed for adoption.

Measures are cited even if the proposal is a departmental proposal rather than a Government proposal.

A. THERMAL INSULATION

	Country							
Measures	В	D	Dk	F	It	NL	IRL	UK
1) Measures to promote higher standards in new buildings viz. : Revised building regulations : compulsory advisory Revised monitoring and control systems Development of residential constructions to meet higher standards	P A A	P A -	P A	A - P A	(A(7) (6 P(4) - 6 P(4)	A A - -	A	A - - A
2) Measures to promote higher standards in existing buildings viz.: Tax reliefs on approved work: residential industrial Grants, subsidies for approved work (residential) (other) Relaxation of rent control Publicity campaigns Competition for ideas Measures to ensure minimum standards of workmanship and professional advice Development of means of improving thermal performance of residential buildings	- (A)(3) - A -	A - A(1) - P A	- P - A A -	A - A (2) - A - A	P(4) - - - P(5) - -	- A A - P -	- - - - A	- A - A - A
3) General measures Professional training	_	_	_	P	_	_	_	_
110168810HaT CLATHING	<u> </u>	_		-				

Notes:

- (1) as part of a short-term employment programme
 (2) for certain narrowly defined categories only
 (3) for certain public buildings only
 (4) Bill dated 19.12.1974
 (5) Bill dated 26.3.1975
 (6) Proposed for Lombardy
 (7) Ministerial order reducing the minimum under ceiling height of dwellings to 2,70 m.

B. HEATING SYSTEMS

	Country									
Measures	В	D	Dk	F	It	NL	IRL	UK		
Mandatory installations standards	P	P	_	P	A(6) (P(1)(2)	_	_	-		
Tax reliefs for approved work to improve heating systems	-	P	_	A	P(1)	-	_	_		
Grants, subsidies for approved work to improve heating systems	_	P	P	A	_	A	_	_		
Relaxation of rent controls	_	-	A	-	A(3)	-	_	-		
Control of the servicing of heating systems	A	_	_	A	P(2)	_	-	_		
Reform of contracts encouraging waste	-	-	-	A	P(4)	-	-	_		
Compulsory installation of calorimeters	-	-	-	A	P(2)	-	-	-		
Promotion of district heating schemes (see also G)	_	A	P	-	P(5)	-	_	-		
Publicity campaigns	A	A	A	A	P(4)	P	A	A		
Competition for ideas	_	A	_	-	-	_	-	-		

⁽¹⁾ bill
(2) bill
(3) bill for the prolongation of tenancy contracts (Art.6 relating to the administration of heating systems);
(4) bill
(5) bill
(6) ministerial order on inside temperatures (18 - 20° C) and the absence of permanent condensation

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C. MEANS OF TRANSPORT

	Country									
Measures	В	D	Dk	F	It	NL	IRL	UK		
Information campaigns for the general public	A	A	_	A	(A(2) (A(3)	P	A	A		
Measures to promote the installation of gauges indicating the "performance" of the driver"	_	_	-	-	_	_	_	_		
Measures to encourage vehicle tuning tests	-	-	-	-	-	_	-	_		
Control of publicity about fuel use) Standard mileage tests of fuel use)	_	-	-	A	-	-	_	-		
Tax favourizing diesel engines	A	-	-	_	A(1)	A	_	_		

^{(1) (}a) Duty of 46% of pump price for gas-oil and 68% of pump price for ordinary or super petrol;
(b) 20% lower tax for diesel cars than those run on petrol;
(2) Information campaign through the widest communications channels (reduced speed, reduced consumption);
(3) bill;

D. TRANSPORT STRUCTURES

	Country									
Measures	В	D	Dk	F	It	NL	IRL	UK		
There are a whole series of measures of a generally energy-saving character, but which are essentially a continuation of pre-1974 policies								i i		
Measures partly or principally adopted or proposed <u>for energy conservation reasons</u> since the 1st January 1974 are:				<u>.</u>						
increased tax on petrol	A	-	-	A	A	A	A	A		
legislation to remove obstacles to car pooling	-	-	-	_	-	A	-	-		
increased parking charges and fines		-	_	A	A	-	_	-		
additional investment in public transport	_	-	-	A	P(1) A(2)	-	_	-		
reduction of taxes on public transport	_	-	_	A	-	_	-	-		
information campaigns on drivers behaviour	_	A	-	A	A P(3)	A	A	A		

⁽¹⁾ bus: 30.000 in 5 years
(2) investment plan of 4,000 milliards of lira of which 2,000 milliards relate to 1975 - 1980
(3) bill

E. INDUSTRIAL PROCESSES - HEAT

	Country								
Measures	В	D	Dk	F	It	NL	IRL	UK	
Tax relief for approved work resulting in energy savings	-	A	+	-	-	-	-	-	
Grants, subsidies for approved work resulting in energy savings	A	A ⁽²⁾	A	A ⁽¹⁾	-	-	A	A	
Training programmes	A	-	A	P	-	_	-	_	
Information campaigns	_	P	A	-	P(4)	P	A	A	
Combustion control	_	-	_	A(3)	A	-	_	_	

(1) relaxation of credit controls
(2) heat pumps only
(3) minimum returns from thermal combustion generators
(4) bill

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F. MOTIVE POWER

	Country								
Measures	В	D	Dk	F	It	NL	IRL	UK	
l. Labels for energy performance	-	_	_	A	-	P	-	-	
2. Information campaigns	A	A	A	A	P(1)	P	A	-	
3. Financing research work	-	A	A	-	_(2)	_	_	_	

^{(1) (}a) ENEL Campaign in preparation (b) bill (2) See final bill "Energetica" of CNR of 24.2.1975

G. CONVERSION IN POWER STATIONS

	Country									
Measures	В	D	Dk	F	It	NL	IRL	UK		
Changes in tariffs in order to get a better loading factor	A	A	A	A	A(1)	A	A	A		
Information campaign of small and average enterprises on the benefits of combined heat and power production	_	A	_	_	P(3)	_	_	_		
Co-operation between public utilities and autoproducers in the field of combined production	A	_	_	_	P(5)	-	_	_		
Inventory of boilers (industrial)	-	P	-	A	_	_	-	_		
Consulting engineering services	_	P	-	A	_	-	_	-		
Measures to encourage the combined production of electricity and heat in industry and for district heating	-	A	A	_	P(2) P(4) (5)	-	_	_		
Measures to relax obstacles to the private transport of electricity from combined power stations	-	_	_	-	-	-	_	-		
Measures to reserve appropriate sites for nuclear power station with associated industrial complexes requiring process heat	P	P	_	P	P(2)	-	_	_		

⁽¹⁾ CIP Decision
(2) bill adopted for publication in the Official Journal
(3) bill
(4) bill
(5) art. 11 of Bill (limited to communes, provinces and municipal enterprises

H. CONVERSION IN REFINERIES

	Country								
Measures	В	D	Dk	F	It	NL	IRL	UK	
No government measures proposed	_	-	_	-	P(1)	-	-	_	

(1) The objective of the 1974 national petroleum plan is the optimalisation of refining systems, of transport and of distribution geared to energy economy.

RECOMMENDATIONS

- Council recommendation of 4 May 1976 on the rational use of energy by promoting the thermal insulation of buildings (76/492/EEC)
- Council recommendation of 4 May 1976 on the rational use of energy in the heating systems of existing buildings (76/493/EEC)
- Council recommendation of 4 May 1976 on the rational use of energy consumed by road vehicles, through better driving habits, (76/494/EEC)
- Council recommendation of 4 May 1976 on the rational use of energy in urban passenger transport (76/495/EEC)
- Council recommendation of 4 May 1976 on the rational use of energy for electrical household appliances (76/496/EEC).

COUNCIL RECOMMENDATION of 4 May 1976

on the rational use of energy by promoting the thermal insulation of buildings (76/492/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES.

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft from the Commission,

Whereas, in its resolution of 17 September 1974 concerning a new energy policy strategy for the Community (1), the Council accepted as an objective the "reduction of the rate of growth of internal consumption by measures for using energy rationally and economically without jeopardizing social and economic growth objectives";

Whereas, in its resolution of 17 December 1974 on a Community action programme on the rational utilization of energy (2), the Council noted that, in its communication to the Council entitled "Rational utilization of energy", the Commission had drawn up a Community action programme in this field;

Whereas a suitable system should be introduced to inform the public of the best ways of improving the thermal insulation of buildings, thereby helping to promote the rational use of energy;

Whereas the measures recommended are likely to produce sufficiently large savings in energy to make the required investment economically worthwhile,

HEREBY RECOMMENDS TO THE MEMBER STATES:

 that they organize or sponsor specific information campaigns designed to stimulate public interest in improving inadequate or poor-quality thermal insulation systems in residential

⁽¹⁾ OJ No C 153, 9.7.1975, p. 1.

⁽²⁾ OJ No C 153, 9.7.1975, p. 5.

- accommodation, particularly by setting up, reorganizing or maintaining information and advisory agencies or offices capable or providing practical information in each case;
- 2. that, in order to ensure the utmost effectiveness of the measures described in point 1:
- 2.1 they assess the average extent of thermal insulation in existing residential accommodation, in particular by sample surveys, and endeavour to find methods of improving it;
- 2.2 they organize competitions or draw up development programmes to obtain the best original ideas for improving insulation in existing residential accommodation, with particular reference to the investment required and to cost effectiveness in terms of energy savings;
- 3. that they adopt the harmonized Community reference standards for thermal insulation which are to be drawn up for use in the implementation of all laws, regulations and administrative measures, in particular to ensure that:
- 3.1 the criteria used as a basis for assessment are identical in all Community countries.
- 3.2 building materials and components may circulate freely on the Community's internal market.

The standards should be applied in stages to every type of building in turn, beginning in 1980 with office and public buildings.

Done at Brussels, 4 May 1976.

For the Council
The President
G. THORN

COUNCIL RECOMMENDATION of 4 May 1976

on the rational use of energy in the heating systems of existing buildings (76/493/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft from the Commission,

Whereas, in its resolution of 17 September 1974 concerning a new energy policy strategy for the Community (1), the Council accepted as an objective the "reduction of the rate of growth of internal consumption by measures for using energy rationally and economically without jeopardizing social and economic growth objectives";

Whereas, in its resolution of 17 December 1974 on a Community action programme on the rational utilization of energy (2), the Council noted that, in its communication to the Council entitled "Rational utilization of energy", the Commission had drawn up a Community action programme in this field;

Whereas tangible results should be obtained as soon as possible in the rational use of energy; whereas considerable short-term energy savings could be made in the heating systems of existing buildings;

Whereas this objective can be achieved in buildings with collective heating systems only if the occupants are able to regulate their own energy consumption and benefit from the resulting energy savings;

Whereas the measures recommended are likely to produce sufficiently large savings in energy to make the required investment economically worthwhile, that they adopt any laws, regulations or administrative measures necessary to ensure that :

⁽¹⁾ OJ No C 153, 9.7.1975, p. 1. (2) OJ No C 153, 9.7.1975, p. 5.

- in existing buildings which are not occupied all the time, e.g. offices and some public buildings
- 1.1 where economically justifiable, heating systems are fitted with an automatic programming and regulating device which will produce the desired temperature curve.

It is recommended that the maximum temperature should not exceed 20°C when the building is occupied and that heat output be kept to a minimum when the building is empty, while at the same time maintaining a sufficiently high temperature to prevent damage to interior structures and installations and to enable the recommended temperature to be reached once the building is occupied;

- 1.2 where economically justifiable, a separate automatic cut-in device is fitted to the collective heating system in every part of the building. For example, where radiators are used, at least one in each room should be fitted with a thermostatic valve which would automatically reduce the flow of water to prevent the maximum recommended temperature being exceeded:
- 2. in existing residential accommodation
- 2.1 where economically justifiable, individual heating systems are controlled by one or more devices which regulate the supply of heat to the dwellings according to the outside or inside temperature or both:
- 2.2 where economically justifiable, the heat supply from collective heating systems is regulated according to the outside temperature and, where technically possible, a heat metering or distributing device is installed in each individual dwelling, to measure the quantity of heat consumed by each user, thus enabling the heating costs to be calculated on the basis of individual consumption;
- 3. as regards the maintenance and inspection of heating systems (excluding electrical appliances)
- 3.1 heating systems with a capacity (1) ≥ 35 kW (approximately 30 000 kcal/hr) are inspected and serviced periodically, for example at least once every three years. If necessary, the Member State may choose a lower capacity threshold. To this end, the Member States should take steps without delay to implement such a programme;

⁽¹⁾ For the purposes of this recommendation the capacity of heating system is the product of the quantity of fuel consumed per hour, at maximum continuous performance, and the lower calorific value of this fuel.

- 3.2 the programme of inspection and servicing of heating systems is developed gradually as staff and funds become available and, in addition, maximum scales of charges for inspection and servicing are regulated;
- 4. as regards improving the efficiency of hot-water systems in residential accommodation
- 4.1 hot-water meters are installed, as far as technically possible and where economically justifiable, to measure the quantity of hot-water consumed by each user so that the heating costs may be calculated on the basis of individual consumption;
- 4.2 the temperature of the hot water distributed is kept at the lowest level compatible with the particular characteristics of the heater and the requirements of the users;

a publicity campaign is organized to inform users of the practical value of keeping the temperature of the water as it leaves the boiler as low as possible and having the heater periodically serviced in order to improve the efficiency of instant hot-water systems in single-family houses.

Done at Brussels, 4 May 1976

For the Council
The President
G. THORN

COUNCIL RECOMMENDATION of 4 May 1976

on the rational use, through better driving habits, of energy consumed by road vehicles (76/494/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft from the Commission,

Whereas, in its resolution of 17 September 1974 concerning a new energy police strategy for the Community (1), the Council accepted as an objective the "reduction of the rate of growth of internal consumption by measures for using energy rationally and economically without jeopardizing social and economic growth objectives";

Whereas, in its resolution of 17 December 1974 on a Community action programme on the rational utilization of energy (2), the Council noted that, in its communication to the Council entitled "Rational utilization of energy", the Commission had drawn up a Community action programme in this field;

Whereas tangible results must be obtained as soon as possible in the rational use of energy consumed by road vehicles; whereas a keener awareness among drivers of economical driving, the choice of a more economical vehicle and proper maintenance will enable these objectives to be rapidly attained;

Whereas measures to reduce the amount of fuel consumed by road vehicles must be made attractive and financially acceptable to users :

Whereas the measures recommended are likely to produce sufficiently large savings in energy to make the required investment economically worthwhile,

⁽¹⁾ OJ No C 153, 9.7.1975, p. 1. (2) OJ No C 153, 9.7.1975, p. 5.

HEREBY RECOMMENDS TO THE MEMBER STATES:

- that motor-vehicle manufacturers be asked to include more practical information on fuel-saving in drivers' handbooks and to present this information in a way that will catch the attention of vehicle owners and arouse their interest;
- 2. that encouragement be given to the fitting of private vehicles with equipment informing drivers of the most economical way to drive. Two methods are suggested:
 - indicating on the speedometer or revolution counter the most economical speed range for each gear,
 - fitting a monitoring device, such as a vacuum gauge on the intake, to inform the driver of his performance (good, average, poor);
- 3. that road vehicle users be requested to ensure that ignition timings and carburettor settings are correct;
- 4. that, with this aim in view, motor-vehicle manufacturers be requested to include in drivers' handbooks clear recommendations to owners to have their vehicles overhauled and adjusted regularly;
- 5. that every type of vehicle on the market undergo a standard fuel consumption test over a range of speeds, the procedure for which must be defined at Community level, and that the results of this test be included in the maintenance instruction manual and brought to the attention of prospective buyers;
- 6. that the fitting of radial-ply tyres on all vehicles, including heavy goods vehicles, be encouraged.

Done at Brussels, 4 May 1976

For the Council
The President
G. THORN

COUNCIL RECOMMENDATION of 4 May 1976

on the rational use of energy in urban passenger transport (76/495/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft from the Commission,

Whereas, in its resolution of 17 September 1974 concerning a new energy policy strategy for the Community (1), the Council accepted as an objective the "reduction of the rate of growth of internal consumption by measures for using energy rationally and economically without jeopardizing social and economic growth objectives";

Whereas, in its resolution of 17 December 1974 on a Community action programme on the rational utilization of energy (2), the Council noted that, in its communication to the Council entitled "Rational utilization of energy", the Commission had drawn up a Community action programme in this field;

Whereas tangible results should be obtained as soon as possible in the rational use of energy; whereas measures in the field of urban passenger transport are likely to contribute to the attainment of this objective;

Whereas the measures recommended are likely to produce sufficiently large savings in energy to make the required investment economically worthwhile;

Whereas in its communication to the Council on the development of the common transport policy, the Commission proposes the development of comprehensive policies that will bring about improvements not only in the transport field but also in the energy situation.

⁽¹⁾ OJ No C 153, 9.7.1975, p. 1.

⁽²⁾ OJ No C 153, 9.7.1975, p. 5.

HEREBY RECOMMENDS TO THE MEMBER STATES:

- 1. that, with a view to ensuring rational use of both public transport and private vehicles, they encourage the authorities responsible to promote frequent, convenient, regular, fast, reliable, comfortable urban public passenger transport services. For instance, the construction of bus shelters and the separation of private and public traffic, for example by introducing bus lanes and special priorities for buses at traffic lights, should be encouraged;
- 2. that they encourage research into the improvement of existing equipment and experimentation with public transport systems that they will meet individual requirements more fully;
- 3. that, in order to reduce commuting distances by private car, encourage the construction of convenient parking areas near public transport termini and important stations and bus stops in urban and suburban areas;
- 4. that they examine the advisability of changing fiscal and other regulations which encourage commuting by private car and long distance commuting by public transport;
- 5. that, where public transport is insufficient, they encourage the highest possible load factor in private cars, particularly by removing the legislative and administrative barriers and regulations which prevent car-pooling on a cost-sharing basis and by adopting the necessary laws, regulations or administrative provisions to prevent insurance companies from introducing or maintaining contractual barriers to such a system;
- 6. that they encourage all measures making the flow of traffic smoother, especially the flow of public transport, for example by more extensive synchronization and programming of traffic lights.

The Council, in adopting this recommendation, is aware that when these measures are being studied and implemented, their implications for other economic sectors including transport and taxation will have to be taken into consideration.

Done at Brussels, 4 May 1976

For the Council
The President

G. THORN

COUNCIL RECOMMENDATION of 4 May 1976

on the rational use of energy for electrical household appliances (76/496/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft from the Commission,

Whereas, in its resolution of 17 September 1974 concerning a new energy policy strategy for the Community (1), the Council accepted as an objective the "reduction of the rate of growth of internal consumption by measures for using energy rationally and economically without jeopardizing social and economic growth objectives";

Whereas, in its resolution of 17 December 1974 on a Community action programme on the rational utilization of energy (2), the Council noted that, in its communication to the Council entitled "Rational utilization of energy", the Commission had drawn up a Community action programme in this field;

Whereas information on the power consumption of electrical household appliances should be made available to buyers in the most comprehensible and standardized manner possible with a view to encouraging them to buy those which use energy most economically;

Whereas the measures recommended are likely to produce sufficiently large savings in energy to make the required investment economically worthwhile.

HEREBY RECOMMENDS TO THE MEMBER STATES:

That they adopt any measures necessary to ensure that :

a) the unit energy consumption of each electrical household appliance listed in the Annex hereto is indicated on a label in

⁽¹⁾ OJ No C 153, 9.7.1975, p. 1.

⁽²⁾ OJ No C 153, 9.7.1975, p. 5.

conformity with harmonized European standards for the information of prospective buyers. The main purpose of these harmonized standards would be to define a common method of labelling and of informing consumers about the energy consumption of electrical household appliances, and to define a method of measuring the unit consumption. Compliance with these standards would be ensured in accordance with procedures which do not impede free movement of goods within the Community;

- b) the same indications of unit energy consumption are used both in consumer information and in advertising, thus providing the consumer with comparable energy consumption figures on which to base his choice;
- c) an information campaign is undertaken in each country to make consumers aware of the way in which each of the electrical household appliances listed in the Annex hereto should be used in order to achieve maximum energy-saving.

Done at Brussels, 4 May 1976.

For the Council
The President
G. THORN

ANNEX

List of electrical household appliances covered by this recommendation

Water heaters
Cookers
Refrigerators, freezers and deep-freeze units
Television sets
Dishwashers
Washing machines
Dryers
Spin dryers
Ironing machines

INTERIM REPORT OF SUB-GROUP A ON THE THERMAL INSULATION OF BUILDINGS

This report studies measures to reduce heat losses in space heating in all buildings, including industrial buildings.

Saving energy by improving the thermal insulation of buildings is a very complex problem, because the field of application is extremely vast, climatic conditions vary from country to country and the economic, social and health aspects must be taken into consideration.

The measures advocated in the report concern both existing buildings and buildings yet to be constructed.

They should be carried out in two phases: the Member States will first set national objectives for saving energy in the heating of dwellings, set up agencies to provide the general public with information, organize information campaigns, make sample-surveys to establish the level of thermal insulation in existing buildings, and possibly launch a competition along the lines of a "suggestions box".

They should then plan:

- to apply the statutory provisions progressively to tertiary sector buildings and, subsequently, industrial buildings;
- to define appropriate action to improve the insulation of new residential buildings;
- to define appropriate action to implement the results of the research, of the surveys, and of the competitions;
- to establish a Community information agency.

Work carried out in this area has led to a Council recommendation (1) on the rational use of energy by promoting the thermal insulation of buildings.

Official Journal of the European Communities, No. L 140, 28 May 1976.

The report of Sub-Group A on the Thermal Insulation of Buildings can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A, 200, rue de la Loi, B - 1049 Brussels.

INTERIM REPORT OF SUB-GROUP B ON HEATING SYSTEMS

This report examines ways of improving the efficiency of heating systems, particularly those in existing buildings, with which the Sub-Group has concerned itself in the first phase of its work.

Fuel savings of between 10 and 30% can be made in buildings which are occupied for only part of the time (offices, shops, etc.) by fitting each room or area with an independent and automatic heat control device. A different approach is needed for residential buildings: the automatic control systems will have to be operated either individually, or collectively - in buildings with collective heating systems. Where there are collective systems, arrangements must be made to charge each household on the basis of real individual consumption.

A considerable saving could also be made by maintaining and inspecting heat generators at least once every three years.

Other measures concern the efficiency of water heating. Users should be charged on the basis of individual consumption, and a maximum temperature of 60° C should be recommended.

Work in this area has led to a Council recommendation (1) on the rational use of energy in the heating systems of existing buildings. A publicity campaign should be organized to back up this recommendation.

The report of Sub-Group B on Heating Systems can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A

200, rue de la Loi,

B - 1049 Brussels.

Official Journal of the European Communities No. L 140, 28 May 1976.

INTERIM REPORT OF SUB-GROUP C ON ROAD TRANSPORT VEHICLES

This report describes the work carried out with a view to seeking energy economies from the improved design and use of motor vehicles.

The economic and technical aspects of vehicle and engine design, the rational use of fuels, and factors which influence the behaviour of car drivers and purchases were also examined.

The following measures were studied:

- measures which could be applied to existing vehicles (regular tuning and servicing, fitting of energy-saving devices, etc.);
- measures which could be applied to new production models (better streamlining, reduced weight, better engine design, etc.);
- long-term measures including the introduction of other types of propulsion and the use of unconventional fuels, which would permit optimum exploitation of hydrocarbon refining and utilization;
- measures to improve driving habits through information to be given in drivers handbooks and in the vehicles themselves (indication of the best speed range for each gear, device for recording driving performance).

Examination of these measures has led to a Council recommendation (1) on the rational use, through better driving habits, of energy consumed by road vehicles.

The report of Sub-Group C on Road Vehicles can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi,

B - 1049 Brussels.

⁽¹⁾ Official Journal of the European Communities No. L 140, 28 May 1976.

INTERIM REPORT OF SUB-GROUP D ON TRANSPORT STRUCTURES

This report examines the scope for saving energy within the next ten years by using it more rationally for passenger travel in urban areas.

Great savings can be made in this area by improving and rationalizing the use of private vehicles, by making public transport more attractive and by improving the flow of public transport vehicles.

The use of private vehicles can be improved by measures such as the synchronizing of traffic lights, speed limits, an increase in average oar occupancy and an extension of pedestrian precincts and streets.

The use of public transport can be stimulated by means of an improvement in frequency and convenience, and can be improved by organizing the movement of public transport vehicles in such a way as to reduce their energy consumption. In addition, the total volume of transport operations, including public transport, could be reduced by means of a change in the distribution of urban areas or by developing telecommunication facilities.

Examination of this sector has led to a Council recommendation(1) on the rational use of energy in urban passenger transport.

The report of Sub-Group D on Transport Structures can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi, B - 1049. Brussels.

⁽¹⁾ Official Journal of the European Communities No. L 140, 28 May 1976.

INTERIM REPORT OF SUB-GROUP E ON INDUSTRIAL PROCESSES - HEAT

Sub-Group E studied ways of saving energy in industry. Some savings can be made without costly alterations to structures and processes, whereas others would involve costly alterations. Other possible ways of saving energy could be studied as part of an R & D programme.

The Member States of the European Community have taken certain financial steps to encourage investment designed to save energy, and other statutory measures concerning the mandatory approval and/or inspection of industrial fuel—combustion plants to ensure a certain minimum efficiency of performance. As yet, however, no action has been taken concerning other ways of reducing energy consumption, so as not to aggravate the state of orisis in industry, one factor of which could be the higher energy prices.

Nevertheless, industry has always endeavoured to make the most efficient use of energy, and has adapted to the changed situation resulting from the increase in energy prices, spontaneously taking all sorts of steps to combat wastage.

A brochure describing these measures, among the studies considered in this report, has been compiled and, we hope, will be published in due course. Besides these measures, studies have been made of one horizontal industrial sector, the technology of high-temperature furnaces (brickworks, cement works, glass and ceramics) and three industrial categories: the sugar industry, the pulp industry and the textile industry.

Lastly, it was decided to compare energy consumption figures per unit of production, to establish which techniques to use or develop in order to attain the energy conservation objectives set.

The report of Sub-Group E on Industrial Processes - Heat can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi, B - 1049 Brussels.

INTERIM REPORT OF SUB-GROUP F ON POWER

This report examines suitable ways of reducing the energy consumption of appliances and equipment in the domestic and tertiary sectors, and the consumption of power and lighting in industry.

The first measures to be examined were those which would not require changes in the design of appliances and equipment already on the market. Such measures are most needed for electrical household appliances, and it is in this area that they would have their biggest effect.

Furthermore, the increase in energy prices has proved to be a sufficiently strong incentive for industrial-power users to make savings. As a result, action in this sector is less urgent and less necessary.

On the other hand, quite a lot needs to be done as regards small firms and craft trades. Measures are suggested concerning:

- lighting;
- non-wasteful use of engines, machines and processes operated by these firms;
- better information for independent tradesmen and small firms on the equipment best suited to their present and future needs.

These measures should be implemented by the following means:

- an information campaign organized by the authorities and aimed at independent tradesmen and small firms;
- an information campaign organized by the manufacturers and directed at the users of electrical household appliances, designed to encourage them to use these appliances more efficiently;
- standardization of the methods of measuring the performance of electrical household appliances.

This work has led to a Council recommendation(1) on the rational use of energy for electrical household appliances. This recommendation concerns the labelling of electrical household appliances in order to inform would-be buyers of the energy consumption of such appliances as well as the method used to measure consumption.

The report of Sub-Group F on Power can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi, B - 1049 Brussels.

⁽¹⁾ Official Journal of the European Communities No. L. 140, 28 May 1976.

INTERIM REPORT OF SUB-GROUP G ON CONVERSION IN POWER STATIONS

The work carried out in this area was an investigation of appropriate ways of improving the efficiency of power stations, of developing the combined production of heat and electricity and of utilizing waste heat.

- 1. Power station efficiency can be improved by the following measures:
- higher steam pressures and temperatures.
- feedwater preheating to higher temperatures,
- steam-turbine-driven feedwater pumps,
- combined cycles (gas and steam turbine),
- nuclear power stations equipped with a light water reactor and a conventional superheater.

The main ways of improving overall power station efficiency are: classification of power stations in the load diagram according to their economic merit, cooperation between public and private producers, improved maintenance, optimum use of power stations through an increased use of storage plants.

2. It is difficult to work out the state of development of combined production because of the lack of adequate statistics. It is therefore necessary to propose the measures to be taken to produce a systematic set of statistics, draw up a list of industrial boilers and, last but not least, summarize the advantages of combined production in an information brochure for small and medium-sized industrial undertakings which use boilers.

The following measures would be needed to expand the combined production of heat and electricity:

- ocoperation between public electricity producers and industrial consumers of heat.

- assessment of the prospects for using power station heat for district heating,
- development of links between heat distribution networks.
- 3. The low temperature of cooling water limits the utilization of waste heat from condensing steam power stations. For most space—heating applications the temperature of the waste heat would have to be raised. The advantage of waste—heat utilization compared with combined heat/power stations for district heating is that no changes need be made to the power—station plant, but a disadvantage is that pipes of very large cross—section are needed, with correspondingly high costs.

Consequently, it is not an economic proposition to use waste heat from condensing power stations for district heating, except perhaps if there is a sufficiently large centre of consumption near the power station.

The report of Sub-Group G on Conversion in Power Stations can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi, B - 1049 Brussels.

INTERIM REPORT OF SUB-GROUP H ON TRANSFORMATION IN REFINERIES

The finding of this report is that own—use in refineries had already been reduced by between 10 and 20%, according to plant, since the months immediately following the crisis in 1973.

This finding points to two courses of action:

- 1. To encourage the exchange of information and experience in order to extend to the whole of the refining sector the positive results achieved at plant level in the various Community refineries, by drawing up a standard list of operating instructions to be circulated to all the refineries of the Community.
- 2. To ascertain the position in the refining sector as regards the savings already achieved and new measures which are to be taken, by means of a questionnaire to be sent to the governments of the member countries, whose replies will be processed in such a way as to guarantee the confidential nature of the information.

The report of Sub-Group H on Transformation in Refineries can be obtained from the following address:

Commission of the European Communities, Directorate-General for Energy, XVII/A 200, rue de la Loi, B - 1049 Brussels.

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