



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 08.12.1995
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94/0272 (COD)

Amended proposal for a
EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE

on Energy Efficiency Requirements for Household

Electric Refrigerators, Freezers and their Combinations

(presented by the Commission pursuant to Article 189 a (2)
of the EC-Treaty)

Explanatory Memorandum

Following the European Parliament's Opinion delivered on 26 October 1995 (first reading), the Commission presents to the Council in accordance with Article 189 a (2) of the EC Treaty the amended proposal for a Directive.

The aim of the amended proposal is to correct and clarify the original proposal, without modifying its general structure and objectives.

Of the 14 amendments adopted by the Parliament, 4 have been accepted and 2 more have been accepted in principle but with some rephrasing.

The Commission has accepted that a certain strengthening of the proposal is needed if any substantial contribution to CO₂ emission reduction is to be achieved, and therefore has accepted the thrust of the Parliament's amendments to considerably strengthen the initial proposal and make it much more ambitious. In particular, the Commission has accepted amendment 10 foreseeing a much shorter implementation time of 2 years and the principle of a more stringent first level of efficiency requirements. However, the level adopted by the Parliament in amendment 11, corresponding to a 20 % average energy efficiency improvement would impose a too high burden on manufacturers, especially if associated with the shorter implementation time. The Commission has therefore proposed for the first phase an efficiency improvement of 15 %, which in its view is the right balance between CO₂ emission reduction, manufacturers' interests, employment and consumer protection; this is a significant strengthening of the original Commission proposal.

The Commission shares the Parliament's view that a dynamic approach is needed and especially a second set of efficiency requirements to enter into force later on; however, the Commission considers that it would be difficult to introduce in the proposal a fixed second level of efficiency requirements as proposed by amendments 9 and 11; accordingly the Commission proposes a rephrased version of amendment 9 and does not accept amendment 11; the new version of Article 8 (amendment 9) proposes to evaluate the technical and economical situation following the entry into force of the first level and, in consultation with interested parties, determine the optimum technical/economical levels of efficiency requirements and the best measures to achieve them, which could consist in either a voluntary agreement by manufacturers, or in a new proposal to set new requirements associated with a mandate to the normalization bodies or a modification of the present proposal.

The Commission shares the Parliaments' desire to have an effective enforcement of the Directive, but considers that the measures foreseen by the original proposal, which are common to all technical harmonization directives following the "new approach", are adequate; therefore it can not accept the Parliament's amendments 5, 6, 7, 8, 13 and, in particular, 14 the one requiring manufacturers to inform all customers of non-complying appliances.

The proposal fulfils the undertaking by the Commission to propose Community-wide efficiency standards for refrigeration appliances, having blocked a proposal from the Netherlands for such standards for appliances sold in their country which would have introduced a potential barrier to trade. Therefore amendment 1 could not be accepted.

Initial Proposal	Modified Proposal
<p>THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,</p>	<p>not changed</p>
<p>Having regard to the Treaty establishing the European Community and in particular Article 100a thereof,</p>	<p>not changed</p>
<p>Having regard to the proposal from the Commission,</p>	<p>not changed</p>
<p>Having regard to the opinion of the Economic and Social Committee,</p>	<p>not changed</p>
<p>Whereas it is important to promote measures aimed at the progressive establishment of the internal market; whereas the internal market comprises an area without frontiers, in which the free circulation of goods, persons, services and capital is ensured;</p>	<p>not changed</p>
<p>Whereas the Council Resolution of 15 January 1985 on the improvement of energy-saving programmes in the Member States invited Member States to pursue and, where necessary, increase their efforts to promote the more rational use of energy by the further development of integrated energy-saving policies;</p>	<p>not changed</p>
<p>Whereas the Council Resolution of 16 September 1986 called for new Community energy policy objectives for 1995 and convergence of the policies of the Member States, and in particular the objective of improving the efficiency of final energy demand (the ratio of final energy demand to gross national product) by at least 20% by 1995;</p>	<p>not changed</p>

Initial Proposal	Modified Proposal
<p>Whereas domestic refrigeration appliances account for a significant share of domestic electricity consumption by households in the Community and thus of total electricity consumption; whereas the electricity consumptions of different models of refrigeration appliances available for purchase in the Community with the same volume and features, that is to say their energy efficiencies, vary very considerably;</p>	not changed
<p>Whereas several Member States are on the point of adopting provisions relating to the efficiency performance of domestic refrigerators and freezers, which will create barriers to trade of these products in the Community;</p>	not changed
<p>Whereas it is appropriate to take as a base a high level of protection in measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States and concerning health, safety, environmental protection and consumer protection; whereas this Directive ensures a high level of protection both for the environment and the consumer, in aiming at a significant improvement of the energy efficiency of these appliances;</p>	not changed

Initial Proposal	Modified Proposal
<p>Whereas the adoption of such measures falls within Community competence and whereas the requirements of this Directive do not exceed those necessary to achieve its objectives, thus conforming to the requirements of Article 3b of the Treaty;</p>	not changed
<p>Whereas, moreover, Article 130r of the Treaty calls for the protection and improvement of the environment and prudent and rational utilisation of natural resources; whereas electricity generation and use accounts for about 30% of man-made carbon dioxides (CO₂) emissions and about 35% of primary energy use in the Community, and whereas these percentages are increasing;</p>	not changed
<p>Whereas, furthermore, Council Decision 89/364/EEC which establishes a Community action programme to improve the efficiency of electricity use has as its twin objectives encouraging consumers to favour appliances and equipment with high electrical efficiency, as well as improving in the efficiency of appliances and equipment;</p>	not changed

Initial Proposal	Modified Proposal
<p>Whereas on 29 October 1990 the Council set an objective of stabilising carbon dioxide (CO₂) emissions in the Community at 1990 levels by the year 2000;</p> <p>Whereas Council Decision 91/565/EEC established a programme (the SAVE programme) to support and further promote energy efficiency in the Community;</p> <p>Whereas the energy efficiency measures incorporated in the more efficient models of refrigeration appliances available do not excessively increase their production costs and such measures can repay their initial cost in terms of electricity savings within a few years or less; whereas this calculation does not take into account the added benefit of the avoided external costs of electricity generation, such as the emission of carbon dioxide (CO₂) and other pollutants;</p>	<p>Whereas the European Community has set the objective of stabilising carbon dioxide (CO₂) emissions in the Union at 1990 levels by the year 2000 and whereas this objective is likely to be unattainable, thus requiring stronger measures to stabilise CO₂ emissions from within the EC;</p> <p>not changed</p> <p>not changed</p>

Initial Proposal	Modified Proposal
<p>Whereas Council Directive 92/75/EEC (the framework directive) and Commission Directive 94/2/EC (applying Directive 92/75/EEC) which require the compulsory labelling of appliances and the provision in other forms of energy consumption information will increase consumers' awareness of the energy efficiency of domestic refrigeration appliances; whereas this measure will therefore also heighten competition on the energy efficiency of appliances above the standards required by this Directive; whereas however the provision of information to consumers without standards would have only a partial effect in terms of improving the average overall efficiencies of appliances sold;</p>	<p>Whereas the "natural" gain in energy efficiency due to market pressures and improvement of production processes, estimated at around 2% a year, will contribute to the effort to reach stricter energy consumption norms;</p> <p>not changed</p> <p>Whereas an efficient enforcement system is necessary to ensure the correct implementation of this directive, fair competition among manufacturers, and to protect the rights of consumers;</p>

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<p>Whereas this Directive, which is aimed at eliminating technical barriers with regard to the energy efficiency of domestic refrigeration appliances, must follow the "new approach" established by the Council Resolution of 7 May 1985 which specifically lays down that legislative harmonisation is limited to the adoption, by means of directives, of the essential requirements with which products put on the market must conform;</p>	not changed
<p>Whereas regard should be had to Council Decision 93/465/EEC which concerns the procedures for conformity assessment intended to be used in the technical harmonisation directives;</p>	not changed
<p>Whereas, in the interest of international trade, international standards should be used wherever appropriate; whereas the electricity consumption of a refrigeration appliance is defined by the European Committee for Standardisation Standard EN 153 of May 1990 which is based on an international standard;</p>	not changed
<p>Whereas domestic refrigeration appliances complying with the energy efficiency requirements of this Directive should bear the CE marking and associated information, in order to enable them to move freely, and to be put into service in accordance with their intended purpose within the Community;</p>	not changed

Initial Proposal	Modified Proposal
<p>Whereas this Directive is confined to domestic refrigeration appliances for foodstuffs, excluding those with an insignificant use of energy in total, that is, domestic refrigeration appliances supplied by mains electricity; whereas commercially used refrigeration equipment is much more varied and not appropriate for inclusion in this Directive;</p> <p>HAVE ADOPTED THIS DIRECTIVE :</p>	<p>not changed</p>

Initial Proposal	Modified Proposal
<p>Article 1</p> <p>This Directive shall apply to electric mains operated household refrigerators, frozen food storage cabinets, food freezers, and combinations of these as defined in Annex I and referred to hereafter as "refrigeration appliances". However refrigeration appliances working on the absorption principle shall be excluded.</p> <p>Article 2</p> <p>Member States shall take all appropriate measures to ensure that refrigeration appliances can be placed on the market and put into service only if the electricity consumption of the appliance type to which that appliance belongs is less than or equal to the maximum allowable electricity consumption value as calculated according to the procedures defined in Annex 1. Refrigeration appliances shall be considered to belong to the same type, referred to in this Directive as "appliance type", if they are produced by the same manufacturer or under licence by a different manufacturer and differ only in aspects which do not significantly affect their energy consumption in use in any way.</p>	<p>not changed</p> <p>not changed</p>

Initial Proposal	Modified Proposal
<p>Article 3</p> <ol style="list-style-type: none"> <li>1. Member States may not prohibit, restrict or impede the placing on the market or putting into service on their territory of refrigeration appliances which bear the CE marking attesting to their conformity with all the provisions of this Directive. <li>2. Member States shall presume that refrigeration appliances bearing the CE marking required under Article 5 comply with all the provisions of this Directive. <li>3. At trade fairs, exhibitions, demonstrations, etc., Member States shall not prevent the showing of a refrigeration appliance which does not conform with the provisions of this Directive, provided that a visible sign clearly indicates that such an appliance does not so conform and that it is not for sale until it has been brought into conformity by the manufacturer or his authorized representative established in the Community. 	<p>not changed</p> <p>not changed</p> <p>not changed</p>
<p>Article 4</p> <p>The conformity assessment procedures to be applied to a given type of refrigeration appliance in order to affix the CE marking are indicated in Annex II.</p>	<p>not changed</p>

Initial Proposal	Modified Proposal
<p>Article 5</p> <p>The CE marking shall consist of the initials "CE". The form of the marking to be used is shown in Annex III. The CE marking shall be affixed to the refrigeration appliance distinctly and visibly.</p>	<p>not changed</p>
<p>Article 6</p> <p>1. Where a Member State establishes that the CE marking has been affixed unduly, the manufacturer or his authorized representative established within the Community shall be obliged to make the product comply and to end the infringement under the conditions imposed by the Member State.</p> <p>2. Where non-conformity continues, the Member State must take all appropriate measures to restrict or prohibit the placing on the market of the product in question or to ensure that it is withdrawn from the market.</p>	<p>not changed</p> <p>not changed</p>

Initial Proposal	Modified Proposal
<p>Article 7</p> <p>Any decision taken pursuant to this Directive which includes any restriction on the placing on the market and/or putting into service of refrigeration appliances shall state the precise grounds on which it is based. It shall be notified without delay to the party concerned, which shall at the same time be informed of the legal remedies available to it under the laws in force in the Member State in question and of the time limits to which such remedies are subject.</p> <p>Article 8</p> <p>Before the expiry of a period of four years from the adoption of this Directive, the Commission in consultation with interested parties shall make an assessment of the results obtained and expected. Following this assessment, the Commission shall consider the need for a new proposal for Community legislation to establish a second set of energy efficiency standards for household refrigeration appliances. If such a proposal is made, its energy efficiency standards and their timing for entry into force would be based on energy efficiency levels which can be economically and technically justified in the light of the circumstances at the time of the proposal. The proposal may also contain any other provisions judged necessary to improve the effectiveness of this Directive.</p>	<p>not changed</p> <p>Before the expiry of three years from the adoption of this Directive, the Commission shall make an assessment of the results obtained and expected. Following this assessment, and after consultation with interested parties, the Commission shall consider the need for new appropriate measures to improve the efficiency of household refrigeration appliances. If this is the case, the energy efficiency measures and their timing for entry into force will be based on energy efficiency levels which can be economically and technically justified in the light of the circumstances at the time. Any other measures judged appropriate to improve the efficiency of household refrigeration appliances will be also considered.</p>

Initial Proposal	Modified Proposal
<p>1. Before 1.1.1996, Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive. They shall immediately inform the Commission thereof.</p> <p>Member States shall apply such provisions as from 1.1.2000.</p> <p>When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.</p> <p>2. Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field covered by this Directive.</p> <p>3. Member States shall, during the period up to 1.1.2000, permit the placing on the market and/or the putting into service of refrigeration appliances which comply with the regulations in force in the Member States at the date of adoption of this Directive.</p>	<p>Article 9</p> <p>1. Within a year after the adoption of the present Directive, Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive. They shall immediately inform the Commission thereof.</p> <p>Member States shall apply such provisions two years after the adoption of the present Directive.</p> <p>When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.</p> <p>2. Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field covered by this Directive.</p> <p>3. Member States shall, during the two year period after the adoption of this Directive, permit the placing on the market and/or the putting into service of refrigeration appliances which comply with the regulations in force in the Member States at the date of adoption of this Directive.</p>

Initial Proposal	Modified Proposal
<p>Article 10</p> <p>This Directive shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Communities.</p> <p>Article 11</p> <p>This Directive is addressed to the Member States.</p> <p>Done at Brussels,</p> <p>For the European Parliament, The President</p> <p>For the Council, The President</p>	<p>not changed</p> <p>not changed</p>

Initial Proposal	Modified Proposal
<p style="text-align: center;"><u>Annex I</u></p> <p style="text-align: center;"><u>Procedures for Calculating the Maximum Allowable Electricity Consumption for a Given Refrigeration Appliance Type and for the Verification of Conformity therewith</u></p> <p>The electricity consumption of a refrigeration appliance (which may be expressed as kWh per 24 hours) is a function of the category of appliance to which it belongs, (e.g. 1 star refrigerator, chest freezer, etc.), its volume, and the energy efficiency of its construction, (e.g. thickness of insulation, compressor efficiency, etc.). In setting energy efficiency standards therefore, allowances must be made for the main exogenous factors which influence energy consumption (i.e. the category of the appliance and its volume). For this reason, the maximum allowable electricity consumptions of a given refrigeration appliance type are defined by a linear equation which is a function of the volume of the appliance; with different equations defined for each category of appliance.</p> <p>To calculate the maximum allowable electricity consumption of a given appliance type, it must therefore first be allocated to the appropriate category from the following list:</p>	<p>not changed</p> <p>not changed</p>

Initial Proposal		Modified Proposal
<u>Category</u>	<u>Description</u>	
1	Refrigerator without Frozen Food Compartment	not changed
2	Refrigerator with 1 Star Frozen Food Compartment	
3	Refrigerator with 2 Star Frozen Food Compartment	
4	Refrigerator with 3 Star Frozen Food Compartment	
5	Refrigerator with 4 Star Freezer	
6	Refrigerator-Cellar	
7	Chest Freezer	
8	Upright Freezer	
<p>Because refrigeration appliances contain different compartments with different maintained temperatures, (which will clearly influence their electricity consumption), the maximum allowable electricity consumption is defined in fact as a function of the adjusted volume, which is a weighted sum of the volumes of the different compartments.</p> <p>Thus, for the purposes of this Directive, the adjusted volume (V_{adj}) of a refrigeration appliance is defined as:</p> $V_{adj} = \sum V_c \times W_c \times F_c$ <p>where V_c is the net volume of a given type of compartment in the appliance, W_c is the weighting co-efficient for that type of compartment and F_c is a factor which equals 1.2 for no frost compartments and 1 for other compartments. Both the adjusted volume and the net volumes are in litres. The weighting co-efficients for the different types of compartment are:</p>		not changed

Initial Proposal			Modified Proposal		
<u>W_c</u> (weighting co-efficient)			not changed		
Cellar compartment		0.75			
Fresh food compartment		1.00			
0°C compartment		1.25			
0 Star compartment		1.25			
1 star compartment		1.55			
2 star compartment		1.85			
3 and 4 star compartment		2.15			
The maximum allowable electricity consumption E _{max} (in kWh per 24 hours expressed to two decimal places), for an appliance type with adjusted volume V _{adj} for each appliance category is defined by the following equations:			not changed		
<u>Category</u>	<u>Description</u>	<u>E_{max} (kWh/24 hours)</u>	<u>Category</u>	<u>Description</u>	<u>E_{max} (kWh/24 hours)</u>
1	Refrigerator w/o FFC	$(0.225 \times V_{adj} + 237) / 365$	1	Refrigerator w/o FFC	$(0.207 \times V_{adj} + 218) / 365$
2	Refrigerator with 1 Star FFC	$(0.599 \times V_{adj} + 178) / 365$	2	Refrigerator with 1 Star FFC	$(0.557 \times V_{adj} + 166) / 365$
3	Refrigerator with 2 Star FFC	$(0.437 \times V_{adj} + 238) / 365$	3	Refrigerator with 2 Star FFC	$(0.402 \times V_{adj} + 219) / 365$
4	Refrigerator with 3 Star FFC	$(0.616 \times V_{adj} + 221) / 365$	4	Refrigerator with 3 Star FFC	$(0.573 \times V_{adj} + 206) / 365$
5	Refrigerator with 4 Star Freezer	$(0.778 \times V_{adj} + 303) / 365$	5	Refrigerator with 4 Star Freezer	$(0.697 \times V_{adj} + 272) / 365$
6	Refrigerator-Cellar	$(0.225 \times V_{adj} + 237) / 365$	6	Refrigerator-Cellar	$(0.207 \times V_{adj} + 218) / 365$
7	Chest Freezer	$(0.480 \times V_{adj} + 195) / 365$	7	Chest Freezer	$(0.480 \times V_{adj} + 195) / 365$
8	Upright Freezer	$(0.478 \times V_{adj} + 289) / 365$	8	Upright Freezer	$(0.434 \times V_{adj} + 262) / 365$

Initial Proposal	Modified Proposal
<p style="text-align: center;"><u>Annex II</u></p> <p style="text-align: center;"><u>Conformity Assessment Procedures</u> <u>(Module A)</u></p> <p>1. This module describes the procedure whereby the manufacturer or his authorized representative established within the Community, who carries out the obligations laid down in point 2, ensures and declares that the refrigeration appliance type satisfies the relevant requirements of this Directive. The manufacturer shall affix the CE mark to all refrigeration appliances of this type the manufactures and draw up a written declaration of their conformity.</p> <p>2. The manufacturer shall establish the technical documentation described in paragraph 3 and he or his authorized representative established within the Community shall keep it, for a period ending not less than 3 years after the last of the refrigeration appliance type has been manufactured, at the disposal of the relevant national authorities for inspection purposes.</p> <p>Where neither the manufacturer nor his authorized representative is established within the Community, the obligation to keep the technical documentation available shall be the responsibility of the person who places the refrigeration appliance type on the Community market.</p>	<p>not changed</p> <p>not changed</p>

Initial Proposal	Modified Proposal
<p>3. Technical documentation shall enable an assessment to be made of the conformity of the refrigeration appliance type with the relevant requirements of this Directive. It shall cover the design, manufacture and operation of the refrigeration appliance type and shall contain as far as is relevant for assessment:</p> <ul style="list-style-type: none"> i) the name and the address of the manufacturer; ii) a general description of the model sufficient for it to be uniquely identified; iii) information, including drawings as relevant, on the main design features of the model and in particular on items which appreciably affect its electricity consumption, such as dimensions, volume(s), compressor characteristics, special features, etc.; iv) the operating instructions, if any; v) reports of electricity consumption measurement tests carried out as required by paragraph 5; vi) details of the conformity of these measurement tests as compared to the energy consumption requirements as set out in Annex I. 	<p>not changed</p>

Initial Proposal	Modified Proposal
<p>4. Where differences between models are such that they have no significant effect on their energy consumption, that is they belong to the same appliance type as defined in Article 2, manufacturers may use the data from a "base model". In this case the technical documentation shall consist of the information listed above for the base model, supplemented for each other model produced by the manufacturer by a description of the differences between that model and the base model. Technical documentation established for other Community legislation may be used in so far as it meets the requirements of this paragraph.</p>	not changed
<p>5. Manufacturers of refrigeration appliances shall be responsible for establishing the electricity consumption of each refrigeration appliance type covered by this Directive according to the procedures specified in European Standard EN 153, as well as the appliance's type conformity with the requirements of Article 2.</p>	not changed
<p>6. The manufacturer or his authorized representative shall keep a copy of the declaration of conformity with the technical documentation.</p>	not changed

Initial Proposal	Modified Proposal
7. The manufacturer shall take all measures necessary in order that the manufacturing process shall ensure that the manufactured refrigeration appliances comply with the technical documentation referred to in point 2 and with the relevant requirements of the Directive.	not changed

Initial Proposal	Modified Proposal
<p style="text-align: center;"><u>Annex III</u></p> <p>1. <u>CE conformity marking</u></p> <p>The CE conformity marking shall consist of the initials "CE" taking the following form:</p> <p>If the marking is reduced or enlarged the proportions given in the above graduated drawing must be respected.</p> <p>The various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5 mm.</p>	<p style="text-align: center;">not changed</p>

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