

EUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION

CENELEC Environmental Policy Statement

The following Environmental Policy Statement was approved by decision of the 101st CENELEC BT.

CENELEC recognises the growing importance of environmental issues and the role that electrotechnical standardization has to play in order to foster sustainable development. CENELEC, together with its members, will therefore endeavour to fulfil the following environmental policy:

1. Through standardization, CENELEC is committed to encourage continuous improvement of environmental performance of electrotechnical products.

Whilst also taking account of market practicalities, CENELEC Technical Committees are requested to assess and continuously improve new and existing standards in order to reduce adverse environmental impacts over the whole life cycle of products.

Through its working group BT WG 85-3 "Environmental Standardisation", CENELEC raises awareness, gives guidance, and advises on standards work related to the environment and its aspects in product standards. This group also co-ordinates CENELEC's participation in standards programmes of other bodies involved in environmental considerations of European standardisation.

2. CENELEC co-operates with other relevant bodies on the environmental aspects of standardization.

In addressing environmental aspects of standardization, CENELEC maintains close relationships with the International Electrotechnical Commission (IEC) and the European Committee for standardization (CEN). Some environmental considerations of standardization are product-specific, and therefore fall within the remit of the relevant Technical Committee(s). However, approaches for defining requirements and test methods are often generic, and are therefore best co-ordinated with other bodies who define similar elements in their standards for products and systems. Co-operation is therefore an essential part of CENELEC's environmental policy.

CENELEC also maintains contact with the European Commission on environmental aspects of standardization, particularly in view of the Commission's established practice of issuing mandates to CEN/CENELEC for the preparation of standards in support of legislation.

CENELEC BT WG 85-3 "Environmental Standardization" is open to participation from all CENELEC members, affiliates and co-operating partners.

CENELEC

Environmental Standardization



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**CENELEC
AND ENVIRONMENTAL
STANDARDIZATION**

Statement of Environmental Principles

October 1997

This Statement was prepared by CENELEC BT WG 85-3: Environmental Standardization, and supersedes the report published in January 1994

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1. INTRODUCTION

Present and future environmental legislation and its related standards initiatives are having, and will continue to have, a direct bearing on the particular requirements of electrotechnical products and related services, and on associated tests. Achieving useful working tools for all the interested parties is a considerable challenge to all standards bodies.

CENELEC first illustrated this impact on standardization in electrotechnology, and its importance for CENELEC, in a special report published in January 1994. In this updated edition CENELEC now re-states its role and objectives in this field.

2. CENELEC's ENVIRONMENT POLICY

The growing importance of preservation of the natural environment, and the legislative and other measures being taken in Europe and at national level to foster sustainable development, all have a direct influence on electrotechnology and its applications.

It is the responsibility of CENELEC to ensure that the regulatory and standards framework for "the environment" which is evolving in Europe, does so with adequate, timely and constructive input from the electrotechnical sector.

Although the environmental elements as given in product standards may be specific, the approach for defining the requirements and tests has to be multi-disciplinary or at least co-ordinated with all the other entities who define similar elements in their standards for their products and technologies. CENELEC therefore recognises that co-operation with others is essential.

In particular, a close relationship between CENELEC and the International Electrotechnical Commission (IEC) is considered vital for effectiveness, and close co-operation is maintained. Similarly a close working relationship is ongoing between CENELEC and CEN.

3. SCOPE

This document adopts the IEC definition of environment:

"Natural environment: attributes which affect the quality of life, such as water, air and soil quality, conservation of energy and materials, and avoidance of waste."

This document deals with impacts *on* the natural environment as defined in IEC Guide 109. It is not concerned with local environmental effects *on* products, nor with *direct effects* of products such as noise, vibration and radiation, which are dealt with elsewhere in European standardisation.

SUMMARY OF CENELEC's ENVIRONMENTAL PRINCIPLES

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**PRINCIPLES OF ENVIRONMENTAL STANDARDIZATION
IN ELECTROTECHNOLOGY**

IMPLEMENTATION OF PRINCIPLES

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**4. PRINCIPLES OF ENVIRONMENTAL STANDARDIZATION IN
ELECTROTECHNOLOGY**
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4.1 CENELEC Role

It is the responsibility of CENELEC, the European Standards Organisation for Electrotechnology, to deal with the development and adaptation of its standards to meet the requirements of European environmental legislation and initiatives, and market demands. The objective, and the challenge to CENELEC is to achieve useful working tools meeting the needs of all the interested parties. More information about CENELEC's role and interests in environmental standardization is given in section 6.

4.2 Direction

The international nature of "the environment" demands that the orientation and basic support for product standardization relating to the environment be given by the international standardisation work of ISO and IEC, supported and assisted by CENELEC and, where this may be necessary, adapted to particular EU requirements.

4.3 Definition

The borderlines of the "environment" under consideration have now been defined at IEC/ISO level by means of IEC Guide 109 and ISO Guide 64, which reflect present legislative trends. Just as these will be kept under review by ISO/IEC, their review in the light of European legislative developments, with due consideration of national initiatives, will also be required by CENELEC in appropriate communication with CEN.

4.4 International Co-operation

An IEC advisory group (ACEA - Advisory Committee on Environmental Aspects) with CENELEC-member participation is now established, which liaises closely with ISO TC 207- Environmental Management. ACEA's particular concern is the maintenance, and use by IEC Technical Committees, of Guide 109 - Environmental Aspects of Electrotechnical Product Standards, which seeks to assist technical committees in dealing with such matters. It is not the intention of CENELEC to prepare an alternative guide for use by CENELEC TCs, but to facilitate and build on the use of the IEC guide.

4.5 CENELEC Work

CENELEC's work in this area is co-ordinated by CENELEC BT Working Group 85-3: Environmental Standardization.

4.6 CEN/ETSI/CENELEC Co-operation

Co-ordination and the sharing of responsibilities with CEN and ETSI is maintained and developed, and regularly reviewed.

4.7 CENELEC/Co-operating Partners

The necessary experience resides in large part with CENELEC's co-operating partners, the European Sector Committees. It is therefore essential that there is close and frequent contact with these partners (but without prejudice to the authority in CENELEC of its committee structure and its National Committee members).

4.8 CENELEC/European Commission Co-operation

With the Commission's practice now well established of issuing mandates to CEN/CENELEC for the preparation of standards to support legislation also in the field of environment, maintaining close and frequent contact with the Commission at the earliest stages of this process is particularly important.

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5. IMPLEMENTATION OF PRINCIPLES

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5.1 Environmental interests in electrotechnology

Environmental characteristics which concern the influence of the environment on the product, such as temperature ranges, resistance to moisture and corrosion, resistance to vibration and shock, etc., have long been included in electrotechnical standards. Other characteristics - those which concern the direct influence of the environment on the human being - such as noise, mechanical vibration and shocks, have more recently been introduced, mainly in response to European legislation.

What must now be considered is the impact of products on the natural environment, and the long term effects of those impacts. This is being handled in CENELEC by BT Working Group 85-3, and the present document is intended to contribute to that process.

5.2 The role of CENELEC standards in the context of legislative initiatives

- The role of standards in implementing present and future legislation on the natural environment has still to be defined. The standards will support the legislation and clarify its application.
- European environmental standards should be the working tools for all parties involved. Direct and indirect efforts on the legislative side will have to be co-ordinated with the standardization initiatives so that the tools are available when the legislation becomes effective.
- The already existing standards dealing with environmental matters have to be adapted to legislation. This can only be done with participation of all interested parties and in particular the industry.
- A substantial effort will have to be made for better participation of all involved parties when drafting and adopting environmental standards. This will enhance the degree of transparency of the work. Adequate procedures for approval and certification will have to be created.

5.3 Real needs for environmental standards

There are two basic types of environmental standard, generic and product specific. (These are defined and their applicability explained in section 8.)

By nature of the topic, determining whether new standards or changes to existing standards are needed in anticipation of market needs may be called for. The

results of such a thinking process must be based on experience or the results may remain incomplete with possible omission of important aspects.

Standards for environmental performance of products are likely to be necessary in the future. Meanwhile much could be achieved by the enhancement of existing product standards with the direct help of environmental experts, and this should be stimulated.

For novel products, completely new environmental standards may be necessary, developed from the outset to take account of additional environment-oriented requirements.

The IEC Guide 109 gives advice to technical committees on dealing with the inclusion of environmental aspects in electrotechnical product standards, and its use in CENELEC is being encouraged. Developed for the electrotechnical sector to complement the more generic ISO Guide 64, this document should assist consideration of the environmental requirements in both existing and emerging standards. This will assist and encourage definition of electrical/mechanical or chemical properties of electro-technological materials and components which may have an influence, direct or indirect, on the environment. In this way CENELEC can influence work to improve the usefulness of the Guide.

5.4 System required for establishing environmental standards in Europe

All standardization work in this field has to be as international as possible. However, there may be occasions when there are particular EU requirements which must be met. European solutions should be proposed and promoted internationally in order to achieve the widest possible acceptance and application, avoiding as far as possible alternative international and European approaches to the same issue.

Environmental standardization can take several paths:

- Establishment of horizontal standards.
- Standardization of the environmental characteristics of the electrotechnical products.
- Supplementary standards on the environmental, characteristics of products, their production and use.

Practical organisation of the work involves consideration of the following:

- Permanent co-ordination with IEC.
- Designation of a body of CENELEC in charge of co-ordination and guidance.
- Approval of the arrangements for the work by the CENELEC Technical Board.

5.5 Co-operation and co-ordination of environmental standards work with CEN/ISO

Industry and commerce must continue to be closely involved in the initiatives for environmental standardization of CEN/ISO. CENELEC is well placed to assist this in view of its composition and its close working links with the IEC.

CENELEC appreciates CEN's initiatives concerning environmental standardization in Europe and wishes to continue to make its own appropriate contributions in a concrete and realistic manner.

5.6 Proposal for co-operation with the IEC

The renewed co-operation agreements for planning new work and parallel approval of standards concluded between IEC and CENELEC (Dresden Agreements) permit the development of plans for the preparation of standards dealing with environmental aspects. An agreed policy between the two organisations should be developed to encourage the creation of suitable environmental product family standards and in exceptional cases dedicated product standards dealing also with environmental aspects, their requirements and measuring methods.

5.7 Proposal for co-operation with ETSI:

A similar approach could also be applied to the ETSI area.

5.8 Conformity Assessment

Where product standards contain environmental aspects, conformity assessment actions will have to take these into account.

THE OPERATING CLIMATE

KEY INFLUENCES DETERMINING ENVIRONMENTAL STANDARDIZATION

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ROLE OF CENELEC

REGULATORY INFLUENCES IN EUROPE

THE REAL NEEDS FOR ENVIRONMENTAL STANDARDS

ESTABLISHING ENVIRONMENTAL STANDARDS IN EUROPE

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6. ROLE OF CENELEC AND ITS STANDARDISATION NETWORK IN ENVIRONMENTAL STANDARDIZATION

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The prime role of CENELEC is the harmonization of all standards in relation to electrotechnology. This is done using, to the maximum extent possible, the relevant IEC publications and all secondary commentary and action relating to the conformity assessment of products and services in electrotechnology.

CENELEC is in this context a part of an interdependent network created by its Members and affiliates (the National Electrotechnical Committees, European institutions and sectoral bodies) and the manufacturers, users, consumers, regulators and suppliers of specialist services organised nationally and internationally.

The CENELEC network links almost seamlessly with the networks of its European sister standards organisations CEN and ETSI and of the regional and the national Governments. The network extends beyond Europe through trade in products, equipment and services and through obligations to the international partner of CENELEC.

The network depends on the CENELEC members to speedily provide rational and non-duplicative solutions in terms of standards and related conformity assessment, but using and making as much as possible reference to the work of other bodies and/or organisations.

The following table defines CENELEC's environmental interests, classified into four groups. This table should be borne in mind by the CENELEC network and all parties affected by the production, existence, performance and disposal of relevant electrotechnical equipment. These issues potentially affect all CENELEC technical bodies responsible for European electrotechnical standardization.

TABLE I

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**POSSIBLE EXAMPLES OF CENELEC ENVIRONMENTAL INTERESTS
IN THE CONTEXT OF WATER, AIR, ENERGY SOURCES AND ECOSYSTEM
WHICH MAY BE DEALT WITH BY CENELEC STANDARDISATION**

GROUP

SUBJECT

- I - Targets for pollution reduction
- Reduction of emission
 - Material conservation
 - Water and waste
 - Product disposal
 - Substitution or reduction of hazardous substances
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- II - Design for material environmental aspects
- Minimum material content of product, including packaging
 - Decreasing the number of different materials
 - Reuse/refurbishing of sub-assemblies or components
 - Easy maintainability, disassembly and recyclability
 - Efficient use of energy and resources
 - Capacity of upgrading to environmental performance
 - Possibility to increase useful life
 - Adequate environmental information/instruction for user
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- III - Measures aspects
- Detect in the standard points related to environmental
 - Identify parameters related to environmental aspects
 - Include in the standards measuring methods
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- IV - Certification
- Environmental audits and conformity assessments
 - Life cycle assessments/ECO labelling

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7. REGULATORY INFLUENCES IN EUROPE

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7.1 Legal need for standards

The "legal" need for standards in the context of environmental legislation, from the regulators viewpoint, has been defined by DG XI of the Commission:

- The European environmental standards will have to support legislation and clarify its application.
- The European environmental standards represent a working tool for all parties and all direct and indirect efforts of legislation must be integrated in these standards.
- The European environmental standards already existing will have to be modified and adapted to the new legislation. The participation of industry and all other interested parties will have to be assured.
- The role of European environmental standards will have to be better appreciated. In consequence the level of promotion and the transparency of the work and the procedures for approval will have to be enforced.

Further backing for the role of standards in sustainable development comes from a recent Council Decision initiating a review of attitudes to environmental protection throughout the EU, and the possible new tools to be deployed in pursuit of sustainable development. Environmental aspects in product standards receive particular mention.

Establishment of the single market implies a broad definition of the single national domestic policies which should be bound to the general policy established at European level. Ground rules for the environment should be set by the most qualified international organisations even if this might slow down the pace of the work.

The involvement of the standards organisations CEN, CENELEC and ETSI in defining and enforcing environmental standards across the EU ensures the interested parties in each country contribute to the new initiatives, and are able to develop long-term business and investment strategies.

7.2 Influence of the European Commission

The European Commission has a wide ranging remit in the environmental field, not limited simply to the removal of trade barriers. The regulatory trend is upward, however the agreed EU policy on sustainable development is, at the

same time, to place responsibility for the environment with others in addition to the regulators. The central premise of the EU's policy and programme is that protection of the environment is necessary to sustain economic growth.

Many EU environmental measures are already in force, covering water pollution, air pollution, waste, dangerous chemicals and nature conservation. Also included are more general measures such as environmental impact assessments, the storage of hazardous substances and public access to environmental information. Many of these measures have a standards aspect, necessary to avoid technical barriers to trade being created.

The underlying principles of the EC activity are that prevention is a first priority, environmental damage should be rectified at source, and that the polluter pays. Additionally, the Commission has undertaken that environmental protection requirements should also feature in other areas of Community policy.

7.3 Environmental Protection as a Potential Source of Trade Barriers

It has long been of some concern that certain proposed national environmental protection measures, which clearly could pose a trade barrier, fail to be notified under Directive 83/189. This arises because environmental protection is an area in which Member States have more freedom than in other trade-related areas to introduce both new measures and measures more stringent than those agreed by the Community.

This in turn exerts further upward pressure on EC regulatory activity, as often the only remedy to the Commission lies in turning such measures into a Community-wide instrument, to avoid the otherwise inevitable trade barrier aspect.

7.4 Impact on the electrotechnical sector

No area of economic or commercial activity can disregard the incoming environmental instruments. Their scope is broad and their reach, both direct and indirect, is long. No economic or commercial activity is regarded as non-polluting. As with EC directives in other areas, standards will be a means of their implementation. Just as the electrotechnical community will be affected by the various environmental improvement measures, it cannot afford to adopt a *laissez faire* approach to the parallel development of supporting standards, neither technically nor commercially. As is already evident, this environmental standards-making is a growth area, and the inevitable certification aspect, a growth business.

7.5 Atmospheric pollution

Among the measures receiving EU regulatory attention, and of particular interest to our sector, are those which aim to reduce or phase out the use of ozone-depleting (upper atmosphere) substances - principally CFCs - and reduce the use of those organic solvents which contribute to ozone build-up in the lower

atmosphere. Such measures include stricter monitoring/control of leakage and spillage into the open, encouraging substitution by less harmful substances, and by outright bans on the worst pollutants.

The upper atmosphere ozone depleters have been addressed by an acceleration of the phasing out agreed under the Montreal Protocol within the Community. The lower atmosphere ozone generators are to be the subject of EU legislation. All users should be aware that reduction and/or substitution of the solvents they are presently using, may entail investment in monitoring equipment, new plant or end-of-pipe technology, as well as in new products.

There are also concerns about climate change caused by the emission of greenhouse effect gases, with the aim of the Rio Convention being to minimise global warming.

7.6 Waste

Of interest also to our sector are those EU instruments which will place responsibility for end-disposal/recycling (of product and packaging) on the original manufacturer. The Packaging and Packaging Waste Directive, which aims to reduce the volume of packaging waste in the EU and to encourage re-use and recycling wherever possible, is complemented by work on measures which apply these similar principles to disposal of the products themselves at the end of their useful lives. Electrical and electronic items are among the first wave of products to which in some countries the "producer responsibility" principle is being applied.

7.7 ECO Auditing

Another EU measure of particular interest to our sector, given its long history of quality system assessment, and certification, is the ECO-Management and Audit Regulation, participation in which by companies is voluntary. Again, this measure seeks to eliminate pollution at source and ensure sound management of raw material resources - the underlying themes of the EU environmental policy.

A large standards programme at international and at European level is associated with this measure and its underlying concepts. International work notwithstanding, the content of the standards for use under the EU regulation is the responsibility of the European standards-bodies, and subject to Commission approval.

7.8 ECO-labelling

A Community-wide voluntary "Eco-labelling" scheme, introduced by a Council Regulation of similar title, encompasses a potentially very wide range of products; it has so far been applied in a small number of cases.

7.9 Fiscal measures

Energy taxes and similar fiscal measures which are intended to reduce consumption/discarding by being a strong disincentive to inefficiency, waste and profligacy detrimental to the environment, also have an inevitable effect on standards and standardization where these provide a means to mitigate such effects.

7.10 Energy Efficiency

The SAVE (Specific Actions for Vigorous Energy efficiency) programme (adopted 1991) provided initially for a five year programme of projects aimed at limiting CO₂ emissions by an improvement in energy efficiency. Under the SAVE programme energy efficiency measures for electrotechnical products are progressively being adopted.

7.11 Energy labelling

The Community initiative to install an energy labelling system, for the purpose of saving energy consumed by household appliances, is already in use for large consuming appliances. Some CENELEC standards are in place and recognised for this purpose, others are in preparation. Recent mandates foresee the merging of ECO and energy labelling for the same products.

7.12 Integrated Pollution Prevention and Control (IPPC)

Variants of this are practised in many members states, and an Integrated Pollution Control Framework Directive will harmonise national approaches. The principle at the heart of IPPC is that pollution should not simply be switched from one medium to another, but reduced overall. Beginning with large enterprises, EU Commission attention now encompasses also small enterprises which perhaps were not subjected to national IPPC measures hitherto.

7.13 Liability for Environmental Damage

The Commission and member states are also wishful to see the polluter pay for damage caused to the environment. Standards dealing with environmental aspects thus take on even greater importance. The considerations involved in determining liability in this area are similar to those for defective product and service liability. Being aware of the cost penalties which could arise, insurance companies across Europe are raising premiums accordingly, which in turn encourages recourse to independently audited environment management standards.

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8. THE REAL NEEDS FOR ENVIRONMENTAL STANDARDS

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8.1 The present situation

In response to requests for international, European and in some cases national standards, activities have been concentrated on the preparation of a lot of standards. These standards can have a "horizontal" character which implies that they are applicable to all kinds of industry and/or products.

Such generic standards are the result of policy defined by horizontal bodies such as ACEA, the CENELEC environmental group, ORGALIME, identified industry federations, etc.

The standards in question define all horizontal aspects of the environmental approach such as elements and procedures for an environmental management system, life cycle analysis methods and procedures and, where applicable, may also define general requirements related to a large product family.

The drafting of specific environmental standards for specific industrial products or processes is not far developed. Such dedicated product standards are otherwise referred to as "vertical" standards.

However, all standards dealing with environmental aspects have to remain voluntary as they are the result of a common will and reflect the consensus established between all involved parties (such as manufacturers and consumers).

8.2 Standards and legislation

Traditionally the consensus process develops standards around a stable established market situation. However, particularly with innovative product technologies and shorter life-cycles, new approaches are required. It is necessary to establish if proposed new standards (or modifications to existing standards) anticipate the real needs of market participants. Faster moving and more forward looking processes may provide less opportunity to utilise previous experience. Hence there are risks of overlooking important elements, and of redundancy with already existing measures. Consolidation of links between adoptive standards and regional and national legislation must be considered in this context.

Up to now the relation between standards and e.g. directives on the environment is not evident. Authorities in these fields do not have the tradition of referring to standards, and the confidence built on the presumption of conformity with legislative requirements when complying with the standards has still to be founded.

An equilibrium between the content of legislation (e.g. directives) and environmental standards has to be promoted and settled. The basis of all these standards should be international, but specific legislative measures may induce European particularities which will be added by the European standards organisations. Some approaches by authorities have indicated that they have discovered the value of standards in support of legislation. A direct collaboration would certainly avoid prescription of measures which are incomplete and with insufficient relevance, rather than being based on experience.

8.3 National initiatives in Europe

In most National Committees due attention has been paid to whether or not the need exists for European standards in the light of the evolution of applicable legislation. Most industrial circles favour European standardization which implements the results of international efforts for environmental standardization (mainly at IEC and at ISO level).

A general view should be to first install the so-called "horizontal" standards and to wait for taking initiatives on more "vertical" standardization.

The existing ISO and IEC guides on integrating environmental aspects in product standards should be given to all technical bodies in charge of the relevant product standards. An application guidance document or a checklist could be helpful.

General standards dealing with ECO auditing, currently being prepared by CEN, will have to be surveyed by the electrotechnical parties. An evaluation will then have to be made on the needs for making an application document for the electrotechnical industry.

To ensure that all these "horizontal" standards already in drafting will be appropriate and relevant to the electrotechnical fields it is important that the electrotechnical industry continues to participate actively in existing ISO, CEN, IEC and national standardization bodies.

More and more environmental performances of products will be defined at national level, so appropriate measures will have to be taken (under the procedures already established for this purpose, such as Vilamoura) to bring these national initiatives to CENELEC with the aim of evaluating the possibilities for proposing the new work items to IEC or to start European work on the subject. As the European electrotechnical industry addresses the world market with its products, the electrotechnical standards dealing with environmental aspects of products processes and services have to be conceived and harmonised on the basis of the most international solution. CENELEC will therefore implement all IEC standards on these matters with a strict minimum of adaptation to the European legislative situation. In the same context, standards dealing with environmental performances of products will be similarly treated. Completely new standards on new technology applications with environmental importance

will be drafted in the light of the existing international guides. Priorities will be given in such a way to avoid disharmony with the international standards work.

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9. ESTABLISHING ENVIRONMENTAL STANDARDS IN EUROPE

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9.1 General considerations

European environmental standards will be established in direct support of the EU ECO policy. Standardisation in this field has to be as international as possible and, given that there may be particular EU requirements which have to be addressed, European solutions should be proposed and promoted at the earliest stage necessary to gain widest possible support and acceptance. Otherwise, if the international standards do not adequately address EU requirements, supplementary elements may have to be added at the European level.

9.2 Proposed standardization approach

Action plans for setting up environmental standardization have to be evaluated in three clearly defined stages:

a. Establishment of a set of high level horizontal standards

These standards should define the environment and also determine the parameters to be taken into consideration. They should be established at ISO/IEC level. The European standardisers should fully contribute to these international efforts.

These horizontal environmental standards should be implemented in Europe as soon as available as they will guide subsequent standardisation work. Where an initiative (mandate) for drafting standards arises from the Commission and/or EFTA with a short target date, European standardisation may proceed. The resulting work will be made available for international standardization if appropriate.

A new tripartite agreement established between CEN/CENELEC/ETSI would settle and guarantee the co-operation and contribution of all involved parties to this work. Systematic reference to the horizontal environmental standards should be made for vertical, more product-related standards, defining environmental characteristics of products and services.

b. Standardization of the environmental characteristics of electrotechnical products

In electrotechnology a systematic review of all product standards will have to be organised at some time to bring the relevant environmental characteristics of products in line with the horizontal environmental standards, so far as possible

taking account of the need for tests and evaluation methods applicable to the products and services.

As CENELEC intends to give preference to international standards, a shared work programme with the IEC will be required (as already exists e.g. for the product standardization on EMC).

c. Supplementary standardization of the environmental characteristics of products and related to the use/production of these products

CENELEC should seek the advice of its co-operation partners such as UNIPEDE, UIC, EUROPACABLE etc. in the light of which a work programme will have to be drafted for the creation of the European standards required to support EU policy. The results of this work will be "internationalised" at the beginning by application of parallel voting on mature drafts. Co-ordination and co-operation with CEN and ETSI will have to be assured.

9.3 Organization of the work

Permanent co-ordination with IEC must be maintained. In CENELEC there will be a need to continue the work of monitoring and planning in CENELEC BTWG 85-3: Environmental standardization. This body will give guidance and advice on the standards work related to the environment and its characteristics in product standards. It will also co-ordinate the execution of any standards programme devoted to environmental standardization which might be executed in CENELEC under mandate of the European authorities. When discussing particular items, BTWG 85-3 may invite participation from those responsible for the detailed environmental standards work in the relevant technical bodies of CENELEC.

9.4 Subjects to be considered

The following table lists and groups subjects which could be relevant to environmental aspects of standardization. Technical bodies and others involved in preparing standards might find this check list helpful.

TABLE II

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ENVIRONMENTAL ASPECTS OF STANDARDIZATION

LIST OF SUBJECTS

Environmental management tools
Impact factor analysis of the tools:
- Environmental audit
- Environmental performances
- Life cycle analysis
- ECO Labelling
Terminology and general definitions
Guides on environmental aspects in product standards
Pollution control and equipment
<u>Waste</u>
- Terminology
- Lixivation
- Sampling
- Household waste
- Permeability
<u>Air Quality</u>
- Terminology
- Emissions
- Ambient air
- General aspects
- Odour requirements
- Room air
<u>Soil Quality</u>
- Terminology
- Sampling
- Chemical analysis
- Physical analysis
<u>Water Quality</u>
- Analysis and sediments
Compost
Radio activity
Chemical substances - environmental effects
<u>ECO toxicology</u>
- Water
- Biotic indexes
- Earth
Noise in the environment

**CURRENT ENVIRONMENTAL STANDARDISATION
ACTIVITIES**

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CEN & ISO

IEC & CISPR

ETSI

OTHER

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10. CEN AND ISO

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10.1 CEN

Those subjects in the environment domain that are of a more general or horizontal nature, or that do not impinge upon electrotechnical standardization, fall under the leadership of CEN. In order that the work of CEN, CENELEC and ETSI in the field of environmental standardization is properly coordinated and broadly follows the same path, cooperation between the three European standardization organizations has been initiated.

Environmental standardization within CEN is coordinated and monitored by CEN Programming Committee (PC) 7 “Environment”. PC 7 has working groups dealing with:

- Environmental aspects in product standards (ENAPS), where ISO Guide 64 forms the basis of support to CEN’s many product sector TCs on the inclusion of environmental aspects in their standards. IEC Guide 109 is the complementary tool for CENELEC’s electrotechnical TCs.
- Environmental management systems, where ISO work has been monitored and implemented as the EN ISO 14000 series, and where further CEN Reports have been elaborated, e.g. “bridging document” giving further guidance to users of EN ISO 14001 wishing to participate in the Community’s eco-management and audit scheme (EMAS) as established under Council Regulation 1836/93/EC.

PC 7 also has a number of Ad Hoc Groups preparing proposals in the areas of recycling, soil, etc. Further functions include overseeing the work of those CEN TCs engaged in environmental standardization activities in order to promote coherency between their various work programmes, monitoring activities within ISOTCs engaged in environmental standardization (in particular ISO TC 207 and its subcommittees), and providing advice to the CEN Technical Board on all matters relating to environmental standardization.

CENELEC is represented on PC 7 and a number of its subgroups, such as PC/WG EMAS and PC/WG ENAPS.

10.2. ISO

The activities of ISO/IEC SAGE (Strategic Advisory Group on the Environment) established the ISO Technical Committee on Environmental Management, TC 207, in June 1993. This has the goal of drawing up international standards for

environmental management of businesses as a means of continuing improvement to achieve sustainable development in their performance.

ISO/TC 207 has six Sub-Committees and 17 Working Groups.

Sub-Committee 1 on Environmental Management Systems produced the ISO 14001 standard: "Environmental management systems - Specifications with guidance for use", and the ISO 14004 standard: "General guidelines on principles, systems and supporting techniques". Their application to and by SMEs is currently under consideration.

Sub-Committee 2 produced the standards: ISO 14010 "Guidelines for environmental auditing - General principles", ISO 14011 "Guidelines for environmental auditing - Audit procedures - Auditing of environmental management systems", and ISO 14012 "Guidelines for environmental auditing - Qualification criteria for environmental auditors". It is now studying the future standards with environmental impacts and the economical audits related to the environment.

Sub-Committee 3 is drafting ECO-labelling standards for products and the Working Groups are elaborating the standards: ISO 14020 "Environmental labels and declarations - General principles", ISO 14021 "Environmental labels and declarations - Self-declaration environmental claims - Guidelines and definition and usage of terms", ISO 14022 "Environmental labels and declarations - Self-declaration environmental claims-Symbols", ISO 14023 "Environmental labels and declarations - Self-declaration environmental claims - Testing and verification methodologies", and ISO 14024 "Environmental labelling - Practitioner programmes - Guiding principles, practices and certification procedures of multiple criteria programmes".

Sub-Committee 4 is drafting ISO 14030 and ISO 14031, standards related to Environmental Performance Evaluation.

Sub-Committee 5 is drafting ISO 14040, ISO 14041 and ISO 14042, standards related to Life Cycle Analysis.

Sub-Committee 6 is drafting ISO 14050 related to Terminology and Definitions. There is also a Working Group for Environmental Aspects in Product Standards that has produced ISO Guide 64.

The ISO 64 Guide has its electrotechnical equivalent in IEC Guide 109. On the environmental activities, the ISO 14050 standard (produced by SC6) defines the common terms to be used by those involved in environmental duties.

ISO published the first series of ISO 14000 standards in September 1996. They were submitted to parallel vote and thus the following are considered European Standards:

EN ISO 14001, EN ISO 14004, EN ISO 14010, EN ISO 14011 and EN ISO 14012.

EN-ISO 14001 has been approved by the European Commission as supporting the EMAS Regulation. A CEN report ("bridging document") contains the requirements of the Regulation which are not fully elaborated in the standard. Compliance with both is required for site registration under EMAS.

A later ISO development has been the formation of a new technical advisory group (TAG 12) to assess the needs of business and consumers for the integration or alignment of the ISO 9000 (quality management) and ISO 14000 series of standards. A proposal is expected by the end of 1997.

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11. IEC AND CISPR

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11.1 IEC ACEA

The IEC working group which produced IEC Guide 109: “Environmental aspects - Inclusion in electrotechnical product standards”, has given way to ACEA, the IEC’s Advisory Committee on Environmental Aspects, which has a wider remit of co-ordination and advice with respect to IEC Technical Committees. The relationship between ACEA and IEC TCs is comparable to the relationship between CEN PC 7 and CEN TCs (section 10.1), and that of BTWG 85-3 with CENELEC TCs.

ACEA liaises closely with ISO TC 207 to ensure that any generic environmental standards produced under ISO auspices are satisfactory for use also by electrotechnical interests.

To date ACEA has one working group, addressing the question of materials declarations.

From several EU countries there is cross membership between ACEA and BTWG 85-3. CENELEC needs to respond, alongside CEN, to EC regulatory environmental initiatives, and generally undertakes where possible to use IEC documents. IEC and CENELEC therefore try to plan and work together, as they are of course dealing with the same family of product standards.

11.2 CISPR - an example:

A good example of experience in environmental standardisation in the electrotechnical fields is given by the activities of the International Committee for the suppression of radio disturbances (CISPR). CISPR is a special technical committee in the IEC preparing standards for the protection of radio services, formulating maximum emissions from equipment, systems and installations and defining their minimum level of immunity to radio interference phenomena. Several publications internationally constituted with the help of relevant experts have been implemented all over the world, and in particular in Europe by CENELEC. European standards directly implementing the CISPR publications have been published and are a substantial part of the product standards catalogue in compliance with European electromagnetic compatibility legislation.

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12. ETSI

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ETSI's environmental interests have been mainly in the area of effects of the environment *on* products:

12.1 ETSI EE1

ETSI has a sub-Technical Committee EE1 (Equipment Engineering/Environmental Conditions), which carries out standardization work in this area. Its terms of reference include the classification of environmental conditions (e.g. mechanical and climatic) and the definition of corresponding environmental tests for all telecommunication equipment installed at telecommunication locations and at customer premises.

12.2 TC/EE Work

TC/EE has finalised the first edition of a multi part standard concerning the environmental parameters of telecommunications equipment. These standards are fully in line with the relevant IEC standards on the same characteristics.

The classification system published and used for the different environments is that laid out in IEC 721. ETS 300 019 seeks to develop IEC 721 in more detail specific to telecommunications equipment.

12.3 CENELEC/ETSI repartition

The present arrangements between CENELEC and ETSI in the equipment engineering area are governed by a set of repartition agreements.

In matters concerning environmental conditions and testing specific to telecommunications, the responsibility for standardization at European level in this area has been allocated to ETSI/TC EE and the relation to the corresponding standards has been assured (relevant work of IEC TC 75 and IEC TC 50). Further co-ordination initiatives will be taken up between the CENELEC/CS and ETSI Secretariat.

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13. OTHER

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Other organizations are engaged in environmental activities relevant to the work of CENELEC. A topical example is ECMA Technical Report TR/70 "Product-related environmental attributes" (June 1997), covering issues like energy,

emissions, materials, packaging and end-of-life-management for specific products (computers, copiers, monitors, printers and television receivers). ECMA has also produced documents dealing with certain noise emissions, and with measurement procedures for electromagnetic emissions from monitors.

DOCUMENTATION



**CENELEC BTWG 85-3: ENVIRONMENTAL STANDARDIZATION
TERMS OF REFERENCE**

IEC ACEA - TERMS OF REFERENCE

ACRONYMS AND ABBREVIATIONS

BIBLIOGRAPHY

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**14. CENELEC BTWG 85-3: ENVIRONMENTAL STANDARDIZATION
TERMS OF REFERENCE**
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To promote activities in CENELEC relevant to minimising any detrimental impact of Electrotechnical activities on the natural environment*. To communicate with and give advice to CENELEC BT and Technical Committees on questions relating to work on environmental issues with the aim of ensuring consistency in CENELEC standards, and to develop and promote guidance where relevant.

BTWG 85-3 shall consider all aspects of the protection of the natural environment against detrimental impact from a product, a group of products, or a system, using electrical technology including electronics and communications. EMC aspects are excluded, but developments will be noted.

BTWG 85-3 shall work with IEC, CEN and the CENELEC co-operating partners and other organizations as appropriate, for example by encouraging the use of IEC Guide 109, 1995.

* "Natural environment": Attributes which affect the quality of life, such as water, air and soil quality, conservation of energy and materials, and avoidance of waste (as given in IEC Guide 109, 1995)

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15. IEC ACEA - TERMS OF REFERENCE
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The object of ACEA is to promote activities in the IEC relevant to minimizing any detrimental impact of electrotechnical products on the natural environment* and to advise IEC technical committees, the Committee of Action and its groups on questions relating to co-ordination of work on environmental issues with the aim of ensuring consistency in IEC standards.

ACEA shall consider all aspects of the protection of the natural environment against detrimental impact from a product, a group of products, or a system, using electrical technology including electronics and communications. EMC aspects are excluded as they are covered by ACEC.

ACEA shall cover environmental matters which are not specific to one single technical committee of the IEC. ACEA may also have to identify aspects which need to be studied "across the board", that is to say aspects of interest to several technical committees.

ACEA shall liaise with other IEC advisory committees, ISO and other organizations, as appropriate.

ACEA shall provide a forum for the discussion of problems of mutual interest between the Chairman and Secretaries of technical committees having considerable interest in environmental matters.

ACEA shall pay particular attention to standards which are intended to be used for conformity assessment purposes.

ACEA shall, if necessary, set up working groups to recommend solutions to specific problems of co-ordination and organization.

ACEA shall report to the Committee of Action.

* Natural environment comprises all attributes which affect the quality of life.

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16. ACRONYMS AND ABBREVIATIONS

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ACEA	IEC Advisory Committee on Environmental Aspects
ACEC	IEC Advisory Committee on Electromagnetic Compatibility
BT	Technical Board
BTWG 85-3	CENELEC BT Working Group "Environmental Standardization"
CEN	Comité Européen de Normalisation - European Committee for Standardization
CENELEC	Comité Européen pour le Normalisation Electro-technique - European Committee for Electrotechnical Standardization
CFC	ChloroFluoroCarbon
CISPR	International Special Committee on Radio Interference (IEC)
CO ₂	Carbon dioxide
DG	Directorate General (of the European Commission)
EC	European Commission
ECO	ECOlogical
EFTA	European Free Trade Association
EMAS	Eco Management and Audit Scheme
EMC	ElectroMagnetic Compatibility
ENAPS	ENvironmental Aspects in Product Standards
ETSI	European Telecommunications Standards Institute
EU	European Union
EUROPACABLE	European Confederation of Associations of Manufacturers of Insulated Wires and Cables
IEC	International Electrotechnical Commission
IPPC	Integrated Pollution Prevention and Control
ISO	International Organisation for Standardization
ORGALIME	Liaison Group of the European Mechanical, Electrical, Electronic and Metalworking Industries
PC	Programming Committee
SAGE	ISO/IEC Strategic Advisory Group on the Environment
SAVE	Specific Actions for Vigorous Energy efficiency
TAG	Technical Advisory Group
TC	Technical Committee
UIC	International Union of Railways
UNIPEDE	International Union of Producers and Distributors of Electrical Energy

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16. BIBLIOGRAPHY

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- IEC Guide 109 Environmental aspects - Inclusion in electrotechnical product standards, 1995-08.
- ISO Guide 64 Guide for the inclusion of environmental aspects in product standards, 1996-12.