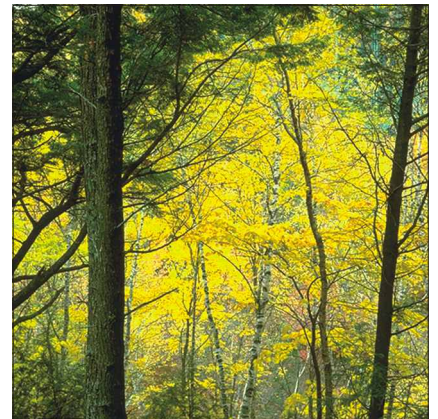
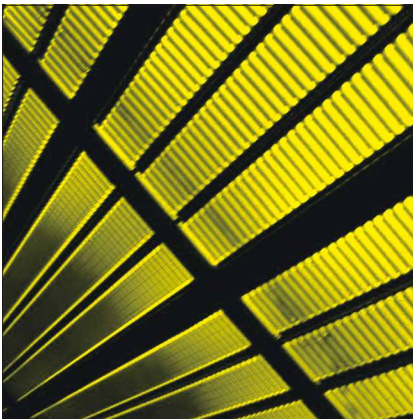




A New Lighting Experience



**European Directives**  
**2002/95/EG – RoHS**  
**2002/96/EG – WEEE**

**The EU's 6th Environment Action Programme**

## EU's 6th Environment Action Programme

The EU's activities for the protection of natural resources and the environment have been summarised in its 6th Environment Action Programme, which rests on the three pillars of climate protection (based on the Kyoto Protocol), environmental protection and avoiding the production of waste.

On the basis of this programme, Directives 94/62/EC (Packaging & Packaging Waste), 98/11/EC (Energy Labelling of Household Lamps) and 2000/55/EC (Energy Efficiency Requirements for Ballasts for Fluorescent Lighting) have been enacted and transposed into national laws in the EU member states.

Fig. 1 shows the aims and tasks of the EU's 6th Environment Action Programme and includes points that are of interest to the lighting industry.

Directives 2002/91/EC (Energy Efficiency Requirements for Buildings), 2002/95/EC (Restriction of Hazardous Substances) and 2002/96/EC (Waste Electrical and Electronic Equipment) are currently undergoing transposition into national laws. Apart from the Directives that have already been enacted, Fig. 1 also lists issues that are being dealt with at present (ECO Design Directive) or are due to be covered in future (e.g. Environmental Product Declaration Directive). This information brochure is designed to shed greater light on Directives 2002/95/EC and 2002/96/EC and is presented from the point of view of the lighting industry. Both of these Directives form part of an EU system of directives which, in line with the EU's 6th Environment Action Programme, aims to reduce the production of waste, make it the manufacturer's responsibility to dispose of any waste that is produced in an environmentally acceptable manner and reduce environmental pollution caused by hazardous substances.

Climate protection	Environmental	
	Environmental requirements	Waste requirements
<p><b>Kyoto-Protocol:</b> Reduction of CO<sub>2</sub> for the EU 8%, for DE 21% until 2012</p>		<ul style="list-style-type: none"> <li>• Directive 94/62/EC Packaging &amp; Packaging Waste directive</li> </ul>
<ul style="list-style-type: none"> <li>• Directive 98/11/EC Energy labelling of household lamps</li> <li>• Directive 2000/55/EC Energy efficiency requirements for ballasts for fluorescent lighting</li> </ul>		
<ul style="list-style-type: none"> <li>• <b>Directive 2002/91/EC</b> Energy efficiency requirements for buildings</li> </ul> <p>Transposition in EU member states: 04.01.2006</p>	<ul style="list-style-type: none"> <li>• <b>Directive 2002/95/EC</b> Restriction on the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Article 95/ Directive i.e. harmonized</li> </ul> <p>Transposition in EU member states: 01.07.2006</p>	<ul style="list-style-type: none"> <li>• <b>Directive 2002/96/EC</b> Waste Electrical and Electronic Equipment (WEEE) Article 175/ Directive (min. requirements)</li> </ul> <p>Transposition in EU member states: 13.08.2005</p>
<ul style="list-style-type: none"> <li>• <b>Directive 200../../EC</b> Proposal for a Directive on establishing a framework for the setting of ECO-design requirements for energy using products and amending Council Directive 92/42/EEC, Article 95 / Directive (for all EU member states the same requirements); no fixed timing yet</li> </ul>		
<ul style="list-style-type: none"> <li>• Possible implementing Directive: Energy efficiency requirements for lamps</li> </ul>	<ul style="list-style-type: none"> <li>• Possible Framework Directive Environmental Product Declaration schemes (EPD) zerostage</li> </ul>	
<ul style="list-style-type: none"> <li>• Possible implementing Directive: Stand-by losses, mandate by CENELEC</li> </ul>	<ul style="list-style-type: none"> <li>• Green Paper IPP (White Paper 3/2003 – Directive not before 2007)</li> </ul>	
<ul style="list-style-type: none"> <li>• GreenLight Programme (Voluntary Programme initiated by Commission)</li> </ul>	<ul style="list-style-type: none"> <li>• ISO TR 14 062: Environmental Management – Integrating environmental aspects into product design and development</li> <li>• ECO Labelling (Regulation 1980/2000)</li> <li>• Green Paper PVC</li> <li>• EMAS (Standard ISO 14 001) Environmental (Management &amp; Audit Scheme)</li> <li>• Integration of environmental aspects into standardisation (EC Discussion Paper)</li> </ul>	

**Fig. 1: Aims and Tasks acc. to the EU's 6th Environment Action Programme**

The EC Directives 2002/95/EC and 2002/96/EC came into force on 13 February 2003 with their publication in the Official Journal of the European Union.

Directive 2002/95/EG (**RoHS = Restriction of Hazardous Substances**) restricts the use of certain hazardous substances in electrical and electronic equipment.

Directive 2002/96/EG (**WEEE = Waste Electrical and Electronic Equipment**) regulates the disposal and reuse of waste electrical and electronic equipment.

The timeframes of the individual steps being taken to transpose the directives are shown in Fig. 2.

It is clear already today that many EU member states (probably including Germany) will be unable to transpose the directives into national laws by the set deadline. In Germany, the directive is to be enacted in the form of an "article law" containing the following four articles:

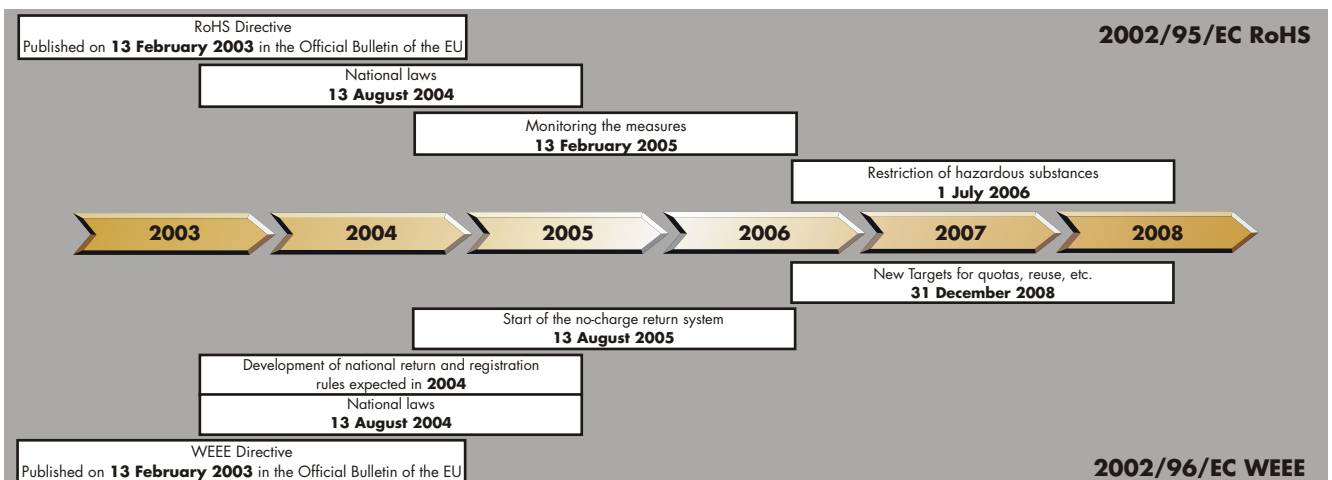
- Law governing the transfer of tasks arising from the ordinance on electrical and electronic equipment (ElektroV-Beliehungsgesetz – ElektroVBG)
- Ordinance on electrical and electronic equipment (electrical), which constitutes the actual transposition of the WEEE and RoHS Directives

- Return to uniform ordinance status (a legality that will only become relevant at a later date) and
- a regulation governing the laws coming into force

Official draft of the laws will be presented in Germany in summer 2004, which will then be followed by a formal hearing. As a result, it will not be possible to pass the German law by the set deadline (13 August 2004), but only at the beginning of 2005. The transposition timeframe is similar in many EU member states. For this reason, concrete regulations have yet to be elaborated for several points.

Directive 2002/95/EC falls under Section 95 of the EU Treaty and therefore has to be transposed immediately with uniform requirements in the EU member states. Directive 2002/96/EC, which falls under Section 175 of the EU Treaty, on the other hand only sets forth minimum requirements that can then be tightened when they are transposed into national laws in the individual member states. At the end of the day, this means that differing laws and regulations regarding the WEEE Directive will arise in the member states. These different laws will have to be observed by the industrial sector in supplying the individual countries. This also applies to the new member states that joined the EU on 1 May 2004.

**EU member states are elaborating differing laws and regulations with regard to the WEEE Directive.**



**Fig. 2: Transposition Timeframe of the Directives into National Laws**

**On 9 Feb. 2004, the EU published a proposal for a Council Decision regarding a deadline extension in respect of Directive WEEE for the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia and Slovenia.**

On 9 February 2004 the EU published a proposal for a Council Decision regarding a deadline extension for meeting the requirements of Directive 2002/96/EC (WEEE) for the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia and Slovenia. With regard to satisfying the stipulated waste disposal quotas, a two-year extension has been proposed for the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Slovakia, like the extensions already granted to Greece and Ireland. An extension of 12 months is proposed for Slovenia. The proposals are expected to be approved. Hence, of the EU's new member states only Poland, Malta and Cyprus will be in a position to transpose the WEEE Directive by the set deadline.

The Directives apply to all products of the electrical and electronics industry and thus to all products of the lighting industry, like lamps and luminaires (including their built-in operating devices, lampholders and other components).

**Directive 2002/95/EC – RoHS**

The RoHS Directive will restrict the use of the following hazardous substances for manufacturing new products with effect from 1 June 2006:

- lead
- mercury
- cadmium
- hexavalent chromium
- polybrominated biphenyls (PBB)
- polybrominated diphenyl ethers (PBDE)

Exemption regulations are in place for fluorescent lamps, other special lamps, glass, electronic components, special steel grades, special soldering processes and special components.

The concentration of hazardous substances in products is restricted in line with the following definition (the exact wording is still being deliberated):

"A maximum concentration of 0.1% of the weight of homogeneous substances will be tolerated with regard to lead, mercury, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated biphenyl ethers (PBDE) as well as 0.01% of the weight of homogeneous substances with regard to cadmium. A homogeneous substance is defined as being a unit that cannot be mechanically separated into its constituent parts without irreparably destroying its function." (This Orgalime proposal has yet to be approved by the European Commission.)

The method according to which a manufacturer will have to furnish evidence of the concentration of substances has yet to be determined.

**Vossloh-Schwabe** has taken steps to ensure its production facilities, the components used during production and thus all of its products will comply with Directive 2002/95/EC as of 1 January 2006. This applies to all product groups and manufacturing processes.

**With effect from 1 January 2006, VS will only manufacture products that comply with the requirements of the RoHS Directive.**

**Direktive 2002/96/EG – WEEE**

The WEEE Directive stipulates that starting from 13 August 2005, the end user will be able to return waste equipment free of charge. To this effect, the products must be identified in a way that makes it clear that the products will have been retailed after 13 August 2005. Deliberations regarding a suitable label are still under way, but will probably show a crossed-out dustbin with an additional marking (for example, a bold black line underneath the dustbin or the date the product was put on the market).

A system for covering the costs of disposing of such waste equipment will also need to be put in place by 13 August 2005.

**The WEEE Directive stipulates that with effect from 13 August 2005, end users will be able to return waste equipment to the manufacturer free of charge.**

In line with the options provided by German law, bilateral agreements or voluntary individual disposal agreements are under consideration for luminaires in Germany. The bilateral agreement model involves the luminaire manufacturer/retailer having to reach an agreement with the customer regarding the costs of collection and disposal. With individual disposal agreements, collection and disposal will be carried out by a third party (contract partner).

The remaining EU member states are expected to pass similar laws. Fig. 3 provides an overview of the situation of the individual nations. The chart is valid as at March 2004; as the individual directives and regulations have yet to be completed, changes must be expected.

The EU member states will deal with the topic of luminaire disposal from private households in a variety of ways. Doctors' surgeries, lawyers' premises or tax consultancies will also be classified as private households.

The need to provide proof of controlled disposal of "new" waste equipment (i.e. equipment that will be put on the market after 13 August 2005) means that every manufacturer/retailer will have to be registered so that the volume of disposed waste can be compared with the volume of retailed products. Attention will also need to be paid to the various regulations passed in the member states in this regard. The registration procedures the member states plan to adopt have not yet been finalised; national laws are not expected until the end of 2004. However, unregistered products will not be permitted to be put on the market.

As there is no central registration point for all EU member states, manufacturers/retailers will have to register separately in all EU member states. First steps towards a central registration point have been taken, but these plans will take time to put into practice.

**As there is no central registration point for all EU states, manufacturers will have to register separately in every EU state.**

Country															
	<b>A</b>	<b>B</b>	<b>D</b>	<b>DK</b>	<b>E</b>	<b>EL</b>	<b>F</b>	<b>FIN</b>	<b>GB</b>	<b>I</b>	<b>IRL</b>	<b>L</b>	<b>NL</b>	<b>P</b>	<b>SE</b>
Population	8	10	82	5	39	11	59	5	59	58	4	4	16	10	9
National law	Summer '04	Valid as of 1 Jul 04	Draft exp. Mar. 04		First draft		Draft 24.11.03		Second draft exp. Mar. '04	Draft exp. 06.02.04	Draft		Summer '04		Since 2001
Collective system + domestic luminaires	Yes	Yes + Yes			Yes ?			Yes + Yes		Yes + Yes			Yes + Yes		Yes + Yes
Visible fee	Yes ?	Yes			Yes ?			Yes ?		Yes			Yes		Yes ?
Bilateral agreements	Yes		Yes				Yes		Yes						
Payment regarding historic equipment	Last user		Last user				Last user		Last user ?						
National register	Yes		Private				Private + non-private (2)		Yes	Yes ?					
Labelling of professional products	Yes	Yes	Yes				No!		Yes	Yes ?					

**Fig 3: Overview of Transposition of the WEEE Directive in the "Old" EU Member States**

Para. 9 of the WEEE Directive was modified by **Supplementary Directive 2003/108/EC**, in accordance with which the costs for historic waste equipment (equipment that was put on the market prior to 13 August 2005) are to be borne by the last owner of the equipment. However, contrary regulations may be elaborated in the member states that would oblige a manufacturer/retailer supplying comparable replacement equipment to bear the costs.

Information regarding registration in Germany can be obtained at the following address:

Altgeräte Register Projektgesellschaft b. R.  
Benno-Strauß-Straße 5  
90763 Fürth, Germany  
Phone: +49 (0)911-76665-0  
E-Mail: info@ear-projekt.de

The provisions of **Directive 2002/96/EG – WEEE** apply to consumer products. However, components that are integrated into such products are not covered by the scope of the directive. Annex I B of the Directive lists large household appliances (possibility of integrated lighting) under Category 1 and lighting systems under Category 5.

These are consumer products:

- refrigerators
- freezers
- washing machines
- cookers and ovens
- microwaves
- luminaires for fluorescent lamps with the exception of luminaires in households
- tubular fluorescent lamps
- compact fluorescent lamps
- high-intensity discharge lamps, including high-pressure sodium lamps and metal halide lamps
- low-pressure sodium lamps
- any other lighting or equipment for the purpose of spreading or controlling light with exception of filament bulbs

In accordance with the scope of validity of the WEEE Directive, components that are integrated into luminaires or household appliances have to be disposed of together with the luminaires or household appliances. The manufacturers/retailers of the end products are obliged to ensure disposal and bear the associated costs. The WEEE Directive does not cover component suppliers.

**The WEEE Directive does not cover component suppliers.**

The active components working group of **CELMA** (Federation of National Manufacturers Associations for Luminaires and Electro-technical Components for Luminaires in European Union, e.g. ANIE, ZVEI, LIF, etc.) has issued a statement to the same effect on this topic. Components are fixed constituents of the luminaire and therefore do not have to be disposed separately.

**Components are fixed constituents of the luminaire and therefore do not have to be disposed separately.**

Therefore all components (ballasts, ignitors, lampholders and LEDs) found in luminaires and household appliance are included. In the same vein, the WEEE Directive is not directly applicable to components that are operated separately from luminaires or household appliances owing to their design features. Such components are seen as belonging to the luminaire or household appliance (functional unit). Separately installed components of this kind (described as independent components in the safety standards) will therefore also be disposed of with their respective luminaire or household appliance and be treated as built-in components.

## Summary of Key Points

### 2002/95/EC – RoHS

- Restriction of certain hazardous substances during the manufacture of new products with effect from 1 July 2004
- Concentration limits with regard to the hazardous substances have yet to be laid down)
- Method of furnishing evidence of substance concentration by the manufacturer has yet to be determined
- Uniform laws in all EU member states
- Restricted substances:
  - lead
  - mercury
  - cadmium
  - hexavalent chromium
  - polybrominated biphenyl (PBB)
  - polybrominated biphenyl ethers (PBDE)

### 2002/96/EC – WEEE

- Disposal of all luminaires that will have been put on the market after 13 August 2005 by the manufacturer or last user (in the case of bilateral agreements)
- Components form an integral part of a luminaire and have to be disposed along with the luminaire
- Differing laws in the 25 EU member states; differing regulations for domestic luminaires (i.e. luminaires used in private households)
- Disposal of historic waste equipment (retailed prior to 13 August 2005) by the last user or in exceptional cases by the manufacturer of the replaced equipment (only in conjunction with delivery)
- Registration of the manufacturer/first retailer of the luminaire
- Labelling (crossed-out dustbin with additional identification, manufacturer, date product was first retailed)
- With effect from 13 August 2005, tracing of retailed and waste luminaires by the luminaire manufacturer
- Ascertainment of reuse and recycling rates by luminaire manufacturers



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