WEEE, RoHS and EuP Directives

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The WEEE Directive

- The WEEE Directive 2002/96/EC is an EU Directive founded on the principle of "Producer Responsibility" and its general objectives are:
- To prevent waste of electrical and electronic equipment (WEEE) and to promote the reuse, recycling and recovery of such wastes
- To improve the environmental performance of operators involved in the life cycle of electrical and electronic equipment, i.e. producers, distributors, consumers and operators involved in the treatment of waste electrical and electronic equipment.
The WEEE Directive

The WEEE Directive applies across ten categories of Electrical and Electronic Equipment EEE as shown in the following list:

- Large household appliances
- Small household appliances
- IT and telecommunications equipment
- Consumer equipment
- Lighting equipment
- Electrical and electronic tools
- Toys, leisure and sports equipment
- Medical devices
- Monitoring and control instruments
- Automatic dispensers
The WEEE Directive

- The Irish government implemented the WEEE Directive 2002/96/EC in August 2005
- As such since 13 August 2005, Producers of EEE are required to register with the WEEE Register Society and, meet their collection, recycling and reporting requirements.
Who the WEEE Directive affects

In Ireland the WEEE Directive affects Producers i.e. any person or organisation who

- Manufactures and sells electrical and electronic equipment under his or her own brand
- Resells electrical and electronic equipment produced by other suppliers under his or her own brand
- Imports electrical and electronic equipment on a professional basis into the State
- Exports electrical and electronic equipment on a professional basis from the State to another Member State of the European Union,
WEEE Obligations in Ireland

- Producers are responsible for financing the take-back of WEEE and have responsibilities regarding collection, recycling and treatment which is all to be reported to the EPA Environmental Protection Agency.
- Producers must register with The WEEE Register Society and report to the Black Box the amount in units and weights (kg) of EEE placed onto the Irish market on a monthly basis.
- Producers must also inform customers of the return and collection systems available to them when supplying a new product.
WEEE Ireland

- Producers of EEE have the option to join WEEE Ireland or similar to meet the obligations detailed. Where WEEE Ireland is a non profit compliance scheme working on behalf of Producers to meet the recycling targets in Ireland.

- WEEE Ireland invoices Producer members on a monthly basis for environmental management costs on the EEE sold into the Irish market during the previous month. This funds the recycling of WEEE collected.

- WEEE Ireland reports directly to the Department of the Environment and the EPA on behalf of Producer members.
Companies registered with WEEE Ireland

A few companies fully registered with WEEE Ireland include:

- O2 Communications Ireland Ltd
- Mitsubishi Electric Europe BV
- Apple Computer International
- Microsoft Ireland Operations Ltd
- Eircom
The RoHS Directive

- RoHS is a European Directive and stands for the “Restriction of Hazardous Substances”.
- These Regulations bans placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.
Who the RoHS Directive affects

The RoHS Directive applies to products placed on the European market with each member state having its own legislation. It affects anyone who

- Manufactures or assemble electrical or electronic equipment
- Imports electrical or electronic equipment from outside Europe
- Re-badges electronic products as their own.
Who the RoHS Directive affects

There are a number of exemptions and RoHS does not apply to:

- Technical uses where alternatives do not presently exist.
- Private individuals making purchases from abroad.
- Retailers and other businesses whom only source product from within the UK or Europe because the first importer into the European market is the responsible person.
The Obligations for RoHS

The RoHS Regulations places the following requirements upon producers:

- Product placed on the market must not contain the hazardous substances above the maximum concentration values
- Producers must prepare documentation to show that their products are compliant before placing them on the market
- If requested, the documentation must be provided to the RoHS Enforcement Authority within 28 days of the request
- The documentation must continue to be maintained for 4 years after the producer stops placing the product on the market.
Why and How RoHS is checked

- RoHS is important as the restricted materials are hazardous to the environment and dangerous to organic life.
- RoHS compliance and verification is checked with the use of Portable RoHS analyzers, also known as X-ray fluorescence or XRF metal analyzers.
Energy Using Products (EuP)

- The impact of EuP legislation for manufactures will largely be during the design process with energy efficiency targets or limits on greenhouse gas emission levels.
- Means of transport are generally excluded under the EuP Framework.
Who the EuP Directive affects

Products that are to be included into EuP are:

- Products that sell more than 200,000 units per year in the EU
- Products that have a significant environmental impact
- Products that have the potential for significant improvements
Who the EuP Directive affects

Implementing EuP measures must not have a significant negative impact on:

☐ A product's price
☐ A product's functionality or performance
☐ The competitiveness of industry within the EU
EuP Manufacturers’ obligations

- Under the Directive, manufacturers and importers are responsible for compliance. If the manufacturer is established outside the EU and has no authorised representative in the EU, the importer will be required to ensure compliance. Under the EuP Directive a number of important requirements must be carried out by the manufacturer/importer.
EuP Manufacturers’ obligations

Manufacturers’ obligations will include:

- Assessing the environmental aspects and impacts of the product
- Designing the product in compliance with eco-design requirements
- Carrying out conformity assessment
- Affixing the CE mark
Life Cycle Assessment / Ecological Profile

- Manufacturers must perform an assessment of the EuP model throughout its life cycle, based upon realistic assumptions about normal conditions and purposes of use. Some design parameters that should be addressed are:
  - Design for use
  - Design for better use of materials
  - Design for manufacture
  - Design for transport and distribution
  - Design for end of life
Development and Maintenance of Technical Documentation

Each EuP covered by an implementing measure requires a technical documentation file which includes:

- The description and intended use of the EuP.
- Its ecological profile.
- Environmental assessment studies by the manufacturer;
- The solutions adopted to meet the required standards
- Quantifiable measurements that prove the EuP meets all applicable standards.
Conformity Assessment /CE Marking

- The EuP Directive is a directive based on harmonising standards. It is also a CE marking Directive and requires the manufacturer to demonstrate conformity through prescribed conformity assessment procedures.

- Conformity requires the affixation of the CE mark on products. Many products will already be carrying the CE mark as a result of other directives.

- Manufacturers will have to show compliance with environmental requirements and be able to prove this in order to affix the CE mark to an EuP.
Conformity Assessment /CE Marking
Examples of eco-design requirements

The European Commission (EC) has adopted a regulation (Commission Regulation (EC) No 1275/2008) imposing mandatory targets on Standby and off mode power consumption of household and office equipment to be applied from January 7th 2010 as follows:

- Power consumption of equipment in any off mode condition shall not exceed 1.0W.
- Power consumption of equipment in any condition providing only a reactivation function shall not exceed 1.0W.
- Power consumption of equipment in any condition providing only an information or status display, or these plus a reactivation function shall not exceed 2.0W.
Examples of eco-design requirements

Also the specifications will likely change over time such as from January 7th 2013 plans are to be reduced to:

- Power consumption in off mode shall not exceed 0.5W.
- Power consumption for a reactivation function shall not exceed 0.5W.
- Power consumption for an information or status display, or these plus a reactivation function shall not exceed 1.0W.
- Equipment shall, where appropriate, offer a power management function.
- It also will look at making requirements from 2011 in harmony with the EU Code of Conduct and the current US Energy Star requirements.
Summary

- The EU aim is to reduce the environmental impact of products with the use of the WEEE, RoHS and EuP Directives.
- The following Directives give the EU a way to regulate the manufacture, use and end of life of products under each Directive.
- It allows the EU to set Non compliance with these Regulations to result in prosecution.
Summary

- WEEE compliance regulates the disposal of equipment and aims to encourage the design of electronic products with recycling and recovery in mind.
- RoHS compliance regulates and looks at reducing the amount of hazardous chemicals used in electronic manufacture.
- EuP legislation regulates with energy efficiency targets and limits on greenhouse gas emission levels.