



The Energy Using Products Directive is likely to have as big an effect on product design as has RoHS.

By **Vanessa Knivett**.

**W**ith the security of our energy supply hanging in the balance and public discussion of new energy generation methods, the European Union has recognised that the burden upon energy supply can be lightened if power consumption is minimised. However, reducing greenhouse gas emissions isn't the only action point on the EU's environmental agenda.



# Are you plugged in?

The impending Energy Using Products (EuP) Directive aims to encourage manufacturers to take a more holistic approach to product design, looking at where the raw materials are sourced, the energy involved in extracting them, the energy it takes to make them into components and then transport them, and the opportunity to reuse components once end of life has been reached, amongst others. Referred to as 'cradle to grave' or 'cradle to cradle', the Directive aims to convince more manufacturers into viewing their products as part of a global lifecycle approach.

Directive 2005/32/EC on the eco design of Energy using Products (EuP) will cover electrical and electronic devices or heating equipment. Whilst the legislation broadly seeks to enforce eco design best practice upon producers, it knits together some existing Directives, such as WEEE and RoHS, with some packaging regulations.

A framework for EuP will be put in

place across the EU member states by August next year. Roger Freeman of test house RFI comments: "Currently, there are taskforces in place looking at each product with a view to developing 'implementing measures.'" Whilst the framework won't have any legal obligations, the implementing measures will.

## Rapid legislation?

Explains Freeman: "The idea of the framework is that once it is in place and the implementation measures are decided, they will get into legislation very rapidly. So, instead of maybe a two year wait, legislation could be in place in six months."

Implementing measures for the first phase of products covered by EuP could be available in 2008 and, once in place, companies that comply with their requirements will be able to use the CE mark.

Notes Freeman: "Products initially under investigation for developing implementing measures are those that have come under the WEEE legislation –

white goods, which tend to be mass manufactured." These comprise heating and water heating equipment; electric motor systems; domestic and industrial lighting; consumer electronics; domestic appliances; office equipment; and heating, ventilating, and air conditioning systems.

There will be two types of implementing measure. The first is a specific requirement where a target is set that can't be exceeded, similar to RoHS. This might, for example, be the absolute maximum power consumption of a washing machine. The second is a generic requirement. Freeman explains: "This starts to introduce nebulous concepts like 'best practice'. It is designed for situations when it is impossible to put a definitive requirement on something, but the aim is for a company to achieve its best."

With such phrases as the need to use 'best available technology', there is some leeway for companies to interpret the Directive to suit their purposes. Comments Freeman: "Hopefully, the generic



requirements won't provide a 'get out' for manufacturers to dodge their obligations. If industry isn't seen to be taking the requirements seriously, the EU will have an opportunity within a few years to revisit them and, potentially, make them stricter – in the same way that they will do so for WEEE and RoHS.”

### The designer's call

From the moment the initial requirements of a product are outlined, the environmental impact of a product

understand not just how the materials they use perform, but also how they are manufactured in the first place.”

Whilst Parker believes that, over the last couple of years, there has been a steady increase in awareness of the importance of energy efficiency, he says: “White goods manufacturers have well established standards for measuring and communicating energy efficiency. But in my experience, most customers have tended to concentrate on RoHS and are just beginning to think about the implications of EuP.”

Comments Freeman: “If a designer is asked to address environmental performance, then they will. The problem to date has been that designers, by and large, are only asked to address the questions of ‘can a product be sold and can a profit be made?’” However, he believes design engineers could be accused of a level of thoughtlessness when it comes to ‘design for reuse’ or ‘design for dismantling.’ “People do silly things like glue bits of plastic together, making them impossible to segregate at end of life; simple design changes would address this.”

He also believes there is confusion about what is of ecological value, citing the example of low energy light bulbs. “These are very toxic and fundamentally

lethal when disposed of incorrectly. However, they are pushed because they cover one aspect of the green agenda. EuP will look at the whole agenda.”


### EuP in practice

Much like RoHS, design teams will need to fill out an ‘ecological profile’ or technical file to demonstrate they have addressed their product’s specific and generic requirements. Specific requirements may require the same kind of conformity inspections as RoHS and companies will need to work through their supply chain to demonstrate their products are using minimum energy in the same way, considers Freeman. Meanwhile, EuP penalties could also be similar in wordage to RoHS.

Companies like RFI could find a role in assisting companies set up their management and inspection procedures and to help write the statement of conformity. Says Freeman: “We would slowly get a feel for what the industry is doing and could be in a position to make some sort of quantified judgement call on the generic requirements, as to whether a company has done the best job possible or not.”

Distributors will, of course, also have a role to play. Confirms Parker: “We want to continue the work we have done with RoHS in communicating to customers about EuP and are waiting for more information from the EU before we can formalise that. Meanwhile, there will be the opportunity to supply environmentally efficient components, new tools to measure energy consumption and provide general information and guidance.”

Whilst the traditional view of environmental legislation is that it is a cost burden, Freeman believes it is time for manufacturers to take a different view. “EuP should be seen as potentially cost saving – if it uses less energy, it should enhance profit margins, not destroy them.” Parker is equally positive: “There are likely to be many companies eager to get in line with EuP before the allotted deadline because of the value to their brand.”

It seems the driver could be economic, rather than environmental. If so, it has a much better chance of success. 

“Hopefully, the generic requirements won't provide a 'get out' for manufacturers ...”

Roger Freeman, RFI

begins to take shape. RS’ standards and directives expert Mick Parker notes: “EuP will really impact the design engineer. Not only is the challenge to design a product with better power consumption, but it will demand that designers compare the environmental performance of every component they use, which price alone might not force them to do. Design engineers will have to