Farnell/Newark *Gary Nevison*

ENVIRONMENTAL COMPLIANCE, 2.0

Farnell/Newark's Gary Nevison discusses several EU environmental regulations that are impacting electronics design across the globe.

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MANAGING LEGISLATION and environmental affairs for UK-based components distributor Farnell and its US-based sister Newark, Gary Nevison is the spokesman and customer interface on design regulations that affect the electronics industry, such as the ROHS (restriction-of-hazardous-substances), REACH (registration/evaluation/authorization-of-chemicals), EUP (energy-using-products), and WEEE (waste-from-electrical-and-electronic-equipment) directives. Nevison recently spoke to *EDN* about materials, substances, and energy-usage restrictions impacting the global electronics industry. Excerpts of that conversation follow.

Have these design regulations bettered the environment?
At this stage, that's not known. While I'd like to think so, there's no clear evidence either way as of yet.

Then why do different governments continue to impose time-intensive and costly materials and substances regulations on electronics design?
The offset of the benefits against costs can be an interesting one. The implementation costs of REACH [in the European Union], for example, over a number of years are expected to be between €2.8 and 5.2 billion. The EC [European Commission] estimates that once REACH is fully in place, there will be 4500 fewer cases of cancer each year and 90,000 fewer allergies per year. Are those savings of life each year worth between €2.8 and 5.2 billion? That's for people to look at and make their own assessment.

It sounds like REACH is the next big regulation.
REACH is big, but it probably isn't as big for the design engineer as ROHS was, and now there's "ROHS 2, the sequel." ROHS was six substances and eight categories of products, but REACH is substances and chemicals pretty much wherever they are used. The design engineer will have to be concerned about obsolescence. The EC expects that 2% of [REACH's] 30,000 chemicals will be made obsolete simply because the manufacturers will not justify the cost of REACH.

Can you define "ROHS 2, the sequel"?
There have been ongoing reviews around the scope of ROHS. The end results that are likely are more product categories falling within scope, more restricted substances, clarity on some definitions, and, finally, a complete review of all 30 exemptions. Certainly what is expected in terms of new-product categories are categories 8 and 9 of the WEEE directive, which are medical equipment and monitoring and control instruments. Those were left out because of lead-free solder issues.

Why is the EC now including those categories?
Once engineers have gotten used to the properties of lead-free solder, the conclusion [by the EC] is that it's no better, but it's no worse, than lead solder. It's just different.

What additional substances could the commission add to the scope of ROHS?
There was a list of 46, which has been reduced to eight. Things like flame retardants and plasticizers are typical examples of what have been under review.

And what's going to happen to the 30 exemptions?
They will only be withdrawn where more suitable alternatives have been found. Over 90% of all equipment depends on at least one exemption [of the 30].

What other regulations are impacting electronics design on a global scale?
EUP is ongoing through 2008 and 2009. Currently, about 20 broad categories are under review, and there are probably about 30 to follow. EUP is all about the energy efficiency of a product from the mining of the raw material through to its recycling and end of life. The whole emphasis of this is at the design phase.

What's your advice to engineers?
They are going to have to be organized. My main advice would be to ensure that they have reliable sources of information. All of these directives in some way, shape, or form will impact the design engineer. ... No matter what directive you have and no matter what guidelines you have, the changes have to be made at the design stage.
—Interview conducted and edited by Suzanne Deffree