Love it or Hate it, Global Environmental Legislation is Here to Stay

By Gary Nevision, Legislation & Environmental Affairs, Newark

Looking back on 2009, it was the biggest year of change since RoHS legislation came into effect in 2006, with real momentum building, and the electronics industry struggling to keep pace with numerous environmental proposals.

With the RoHS and REACH regulations now embraced by an ever increasing number of design engineers around the world, the US is in danger of falling behind, especially as more substances will be restricted in designs over the next few years. Rather than taking a view that “lead-free solder will never catch on”, the US must become more aware of the legislative and environmental momentum that is growing around us.

While 2009 may have ended with concerns around the potential levels of antimony on Mr. Squiggle’s robotic pet hamster’s nose and hair, there had been more serious debates around toxic substances throughout the year. Design engineers have had a lot to consider, with proposals that would lead to many more products falling within scope, potentially more substance restrictions, a change in testing methodology and even a new geography with the first draft (some two years late) of the China RoHS - restriction of hazardous substances - “Catalog”. If ever there was any doubt before, 2009 was the year when the electronics industry realized that legislation would have a significant impact for many years to come. Some would even say that the new laws would engulf the electronics industry, and that the days of simply buying and selling products were gone forever, with safety data becoming a significant obligation.

2009 started with proposals to amend the scope of the RoHS Directive. Further recommendations from the European Commission (EC) in September were quickly followed by the first draft of a recast in November.

The political process will kick in and there will be a vote, maybe even a further recast during 2010, before these proposals are passed to governments for transposition.

Among the possible changes that will impact design engineers is a new Category 11, where the scope would simply be “other electrical and electronic equipment not

covered in any of the Categories 1 to 10." In addition, the current exclusion of large-scale stationary industrial tools would be deleted under the proposals, so that all electrical and electronic equipment (EEE), including manufacturing production line equipment, would be in scope.

The controversial "equipment that is part of another type of equipment that does not fall in scope and can only fulfil its function if it is part of that equipment" is proposed to change to "part of stationary installations or transport equipment that is not electrical or electronic equipment". This would bring into scope all electrical products used in buildings and transport, all "fixed installations" and electrical parts in aircraft, trains, ships and commercial vehicles.

Equipment covered by the new Category 11 would come into scope in 2014, in line with Category 8 (medical devices) and Category 9 (monitoring and control instruments). The list of restricted substances could well increase considerably under the proposals and include PVC, chlorinated plasticizers, organohalogens, flame retardants and three phthalates.

A move towards a REACH (Registration Evaluation Authorization –and restriction- of Chemicals) methodology for substance restrictions would be welcomed by the industry, based on a thorough risk assessment rather than simply a potential hazard as with RoHS.

The second batch of 15 REACH "substances of very high concern" (SVHC) was announced in December by the European Chemicals Agency (ECHA). This takes the total to 30, with a further batch expected later in 2010. ECHA sources think that over time as many as 600 to 700 SVHCs could be added to the Candidate List.

REACH, unlike RoHS, is not simply a case of providing a certificate of compliance, but drives the flow of safety data down through the entire supply chain. This includes automatically providing a Safety Data Sheet (SDS) both at the point of first order, as well as when the SDS is revised.

Gathering the SVHC data has proved to be a challenge to the electronics industry due to a shortage of information, and a very slow response from many manufacturers at the top of the supply chain. We witnessed this with the RoHS Directive in 2005 and 2006, but the response to requests for REACH data has been far worse.

It is likely that the electronics industry will not have collected the obligatory data on the first batch before the second and maybe even third batch of SVHCs is published.

Seven substances have been approved for authorization of use, and this costly exercise must be completed within a limited period of time and before its "Sunset Date", once they are added to Annex XIV. Otherwise, the substance cannot be used. Any downstream user can thereafter only procure the product from the source of the authorization request where it has been granted.

In October 2009 the Chinese Government published the first draft catalog of

Electronic Information Products that will be subject to China RoHS restrictions. While the catalog will be updated periodically, the initial scope is limited to telephones and all types of printers that attach to a computer. All kinds of phones are covered including mobiles, landline telephones and networked handsets. Substance restrictions and maximum concentration limits are generally the same as with RoHS in the European Union (EU), where 10 of the exemptions are used for telephones and 12 for printers.

Companies exporting products into China for sale in China will require their products to be tested and certified compliant by an approved Chinese test house. In the future, this may create a bottleneck as these obligations will enter force just ten months after the legislation is adopted by the Chinese Government.

Finally, manufacturers or importers of batteries into the EU must be aware of specific labelling requirements. Many are failing compliance due to the size of the wheelie bin and / or the hazardous substance symbols. Cadmium and mercury are now restricted and while lead is permitted, it must have a symbol on the battery if above a specified concentration. Batteries supplied in equipment have the same restrictions and must be marked in the same way as batteries supplied separately. There are specific requirements for equipment which must be designed to enable users to “readily” replace batteries other than where there is a safety, performance, medical or data integrity exemption.

So, what will 2010 bring?

Definitely more substance restrictions, more products falling within scope of the regulations, more revised exemptions, more data requests up and down the supply chain and most likely, more frustration!!

Follow Gary’s legislation updates on element14 (www.element14.com [1])

Source URL (retrieved on *12/08/2013 - 7:39pm*):
http://www.wirelessdesignmag.com/articles/2010/02/love-it-or-hate-it-global-environmental-legislation-here-stay?qt-digital_editions=0

Links:
[1] http://www.element14.com