

RoHS Compliance for a Global Economy

Date: December, 2006

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Abstract: The Restriction of Hazardous Substance, or RoHS, act took effect on July 1, 2006, for all member states in the European Union. Failure to comply means the inability to do business long-term with customers in EU member states.

Say Hello to RoHS

Beginning July 1, 2006, a new rule came into effect that impacts how computer hardware vendors design, build, support and dispose of their products worldwide. The Restriction of Hazardous Substance, or RoHS, directive passed by the European Parliament and the Council of the European Union in January 2003 became a formal law in Europe. Of specific application to these vendors is a provision within the law dictating acceptable levels of hazardous minerals used in the construction of most computer hardware. Though applicable and enforced only by countries that are members of the European Union, the ripple effects of RoHS are felt worldwide.

Why the Need for RoHS?

Computer hardware (including servers and storage systems) contains an astonishing amount of materials that are hazardous to human health in the construction of its electronic parts, which RoHS seeks to limit and control. Cadmium, used in the construction of rechargeable cadmium-nickel batteries and many forms of solder, contributes to anemia, emphysema, high blood pressure and damage to the kidneys. Mercury is used as a vapor inside fluorescent tubes that help illuminate LCD screens, but is also a factor in kidney and brain damage as well as birth defects in pregnant women. Cathode ray tubes in computer monitors may contain two to seven pounds of lead, which is associated with hyperactivity, retardation, senility, cancer and even death. Other less well known materials defined in RoHS have similar adverse affects on human health.

The danger with the use of these materials in computer equipment is not in either their construction or use, but in their disposal. Though precautions certainly need to be taken in the first two phases, it is when they are disposed of that their danger begins to grow. For with the continuing adoption and growth of computer technology worldwide and the relatively short shelf life of computer equipment (1 - 5 years), technology that is on data center production floors today can quickly show up in city landfills tomorrow. As this occurs, toxic materials that were so carefully handled, packaged and maintained are now haphazardly combined with everyday garbage and can eventually work their way into the food we eat and the water we drink.

The Impact of RoHS

Rather than treating the symptoms associated with the disposal of computer equipment and trying to legislate how hazardous materials are handled post-production, RoHS seeks to eliminate the problem of computer equipment disposal at its source--overhauling the process of how computers are designed, manufactured and assembled. By changing what materials are included in the manufacture of computer components, you eliminate the human and environmental hazards that their disposal creates. Yet to comply requires that suppliers of this equipment to European countries do much more than affix a RoHS compliant sticker on new computer equipment.

RoHS defines an expansive list of computer manufacturers and resellers. Manufacturers that produce and sell equipment under their own name must comply. Resellers that sell equipment produced by other manufacturers with their name on it must comply. Finally, any company that imports or exports this type of equipment on a professional basis into or out of an EU member state needs to comply.

This wording prevents the temptation for computer manufacturers to avoid the responsibility of creating RoHS compliant hardware by simply outsourcing the manufacture of their hardware to someone else. Once their name is on the hardware, they are liable for the components that this hardware contains. However, unlike other laws that may provide exemptions for absence of knowledge, good or bad, RoHS does not. RoHS completely prohibits computer hardware containing levels of hazardous materials above the stated limits.

This explicit prohibition changes the dynamic of the law and, more importantly, how it is enforced. Manufacturers and suppliers cannot so easily dismiss allegations that their hardware contained parts exceeded defined levels and promise to comply going forward. Rather, they must demonstrate due diligence and prove that they have taken reasonable precautions to ensure that no hazardous substances are present in the equipment they manufacture or resell.

This impacts how they provide services to their users and what options they can offer to them. Until 2010, RoHS does contain provisions to allow computer providers to sell replacement parts that are not RoHS compliant. This allows users to continue to operate existing computer equipment and obtain parts for this equipment legally. However, for those users who need to replace aging equipment or buy for new projects, if equipment from their present computer provider does not meet these new standards, they may be forced to wait until the equipment is compliant or to look to other providers for this hardware.

The consequences for computer providers who do not comply with RoHS are much more severe. As of right now, unless new computer equipment complies with RoHS, the door to selling new equipment to customers who live in EU member states just slammed shut. This cuts off immediate revenue streams and possibly results in the long-term loss of customers as they switch hardware, and possibly software, platforms. Another is that they have a greater responsibility to ensure that the processes involved with making the components that go into the hardware they sell are RoHS compliant. Exactly what level of oversight and effort that enforcement agencies will require on their part remains to be seen.

ESG's View

RoHS represents a departure from how laws are normally drafted. Rather than dealing with the symptoms of the problem, it attempts to deal with the source, and for good reason. No one wants to drink water and eat food knowing that remnants of their laptop or monitor are in its make-up or that individuals in other countries are being harmed by our waste computer products. RoHS is expanding beyond Europe with California and China requiring RoHS compliance by January and March 2007 respectively.

In the meantime, claims of vendor compliance with RoHS should be viewed in a guarded manner. Be on the look out for whether your vendor has a "green supply chain." Many vendors have problems complying because their parts suppliers have not complied to RoHS.

The storage vendors that do not currently support RoHS need to step up. Hitachi Data Systems was one of the first to become RoHS compliant and we urge others to follow. RoHS will impact their success in Europe and it's the right thing to do. The storage vendors that do support RoHS, we applaud you. It is a smart business move, it shows an understanding of doing business on a global scale and it's the "green" thing to do.