

DIRECTIVES WEEE/ROHS: FROM EARLY INFORMATION TO THE SLOVENIAN IMPLEMENTATION

Janez Renko

Electrical and electronic engineering association, Chamber of Commerce and Industry of Slovenia, Ljubljana, Slovenia

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Abstract: EU Directives: 2002/95/EC on the restriction of use of certain hazardous substances in electrical and electronic equipment (RoHS) and 2002/96/EC on waste of the electrical and electronic equipment (WEEE) have a major influence on technology and market conditions to which companies in electrical and electronic engineering industry is faced to.

Process leading to substantial changes in companies imposed by directives: from collecting early information at the stage when draft directive was prepared, providing information and awareness raising campaign with special view on SME, following with exchange of information and best practice between associations on EU level and establishing working groups RoHS and WEEE, cooperation with authorities in Slovenia and also participation in collective research project in 6.FP is described.

Direktivi WEEE/RoHS: od začetne informacije do Slovenske implementacije

Ključne besede: WEEE, RoHS, nevarne snovi, skupni raziskovalni projekti

Izvleček: Direktivi EU 2002/95/EC glede omejitve uporabe določenih nevarnih snovi v električni in elektronski opremi (RoHS) in 2002/96/EC glede odpadne električne in elektronske opreme (WEEE) imata velik vpliv na tehnologijo in razmere na trgu, s katerimi se soočajo podjetja, ki delujejo na področju elektronike.

V prispevku opisujem proces, ki je pripeljal do velikih sprememb v podjetjih, ki jih direktive prizadevajo: od zbiranja podatkov v času, ko sta direktivi bili še v poskusni fazi, ko sta podajali osnovne informacije in dvigovali raven zavesti v podjetjih, preko izmenjave informacij in najboljše prakse med združbami na nivoju Evropske skupnosti z uvedbo delovnih skupin RoHS in WEEE in nato sodelovanje s Slovenskimi oblastmi in soudeležbo v skupnem raziskovalnem projektu v okviru 6.FP

1. Introduction

Environment protection and sustainable development in manufacturing industry has been in EU of the major concern for a long time. Not only pollution through production processes but also other aspects like water consumption in production, energy efficiency of product in its regular use has led to changes in EU policies and subsequently in regulatory framework. Dynamic emergence of new electrical and electronic products in broad area of use in every days life has brought to a large amount of used products which became waste at the end of their useful life. Large stream of electrical and electronic waste and the presence of dangerous substances in this equipment which demand proper treatment has brought to an EU legislative initiative for a WEEE and RoHS directive.

Slovenia has a strong electrical and electronics industry with final as well as intermediate products which are exported traditionally to EU market and through this inevitably influenced by the processes mentioned. The WEEE/RoHS legislative process on EU level as well as somewhat simultaneous efforts of the EU industry and research institutions have been closely followed by Electronic and Electrical Engineering Association (EEEE) of Chamber of Commerce and Industry (CCI) Slovenia from 1999.

The WEEE legislative process has been considered as a case of multiple impact to our industry: collecting early information on future legislation, collecting and dissemination of information on research efforts on potential new substances to replace the banned ones in EE equipment and also aspects on design of new products, taking into account the WEEE directive.

2. WEEE & RoHS Awareness raising and implementation process

2.1. Collecting early information: EU legislative initiative and reaction of industry

After having conducted a study on specific streams of waste, which has shown substantial growth of the electrical and electronic waste stream in the near future and actual consequences of often improper treatment of such waste - from collection to the disposal phase, legislative process for WEEE directive has included the hazardous substances. The importance of the simultaneous reduction of hazardous substances in EEE has been one of the reasons that this area also was initially included in WEEE. The initial WEEE legislative initiative has somewhat boosted the intensity of research and industry efforts in searching for new substances. One of the first contacts with information of the research results on lead-free solder and lead-free soldering problems has been for EEEA in Productronica Fair in Munich 2000. Simultaneously the legislative process in EU was followed by EEEA through the work of task force for the WEEE at ORGALIME, Liaison group of the European mechanical, electrical, electronic and metalworking industries as one of the strongest EU industry federations. At that time, in the first quarter of 2000, the process was aiming to reach the Commission proposal of WEEE to the Council and the Parliament. Details on producer responsibilities regarding financing, cost and collection, historical waste and collection targets were discussed. It was proposed by the industry that design and substances issues should be legislated under article 95 of the EU Treaty as not to distort internal market, which resulted later to the separate RoHS directive. Contacts and discussions had been held with Japan and American industry representatives in EU regarding ban of hazardous substances, where some Japanese companies have established ambitious plans to completely phase out lead from their products by 2002.

At this time the discussions on the possibility of developing "new approach" framework directive on environmental requirements which could include provisions on eco-design, processing, energy efficiency and maybe the use of certain substances and materials in products; the idea has then led to the today's already adopted "eco design of energy using products (EuP) directive".

2.2. EE Forum 2001 in Ljubljana: Information and awareness raising events for electrical and electronic industry

Although companies which have contacts with providers of certain materials and substances have already had some knowledge on the lead-free efforts, the need for immediate start of providing information both on technology issues as

well as on future legislative aspects and obligations for producers (suppliers of the EE equipment) was considered priority. The opportunity for an event promoting the issues on WEEE and RoHS has been taken in October 2001. A series of round table discussions under the title "EE Forum" during the fair "Sodobna elektronika 2001" in Ljubljana were organised by EEEA of CCI with the support of "Ljubljanski sejem". The WEEE and RoHS issues as central theme were discussed with experts from industry and representatives from responsible ministry. Specifically, the discussion was focused on the experience in the applying lead-free technology so far in industry, further to some outstanding issues and also experiences in the collection and recycling schemes of household and some other electronic equipment already existing in some EU member states. Similar EE Forum was organised in October 2003 in the framework of the same fair, where discussion was already focused to the implementation of already adopted Directives WEEE and RoHS.

At this time in 2003 a large scale discussions on WEEE and RoHS implementation issues on national level with companies, industry associations, national administration as well as in industry federations the EU level has taken place. The aim was to prepare guidelines for the WEEE implementation and take back system according to the provisions in WEEE and at the same time for its efficient and rationale functioning. Also RoHS issues regarding exemptions and other outstanding issues essential for economic operators were analysed. EEEA has acted as an observer in the process and while, gathering information, identifying at the same time the stakeholders and its role.

2.3. Establishment of Working Group WEEE and RoHS in CCI: Awareness raising, sharing good practices and transposition process in RS

In 2003 collection of information from Task Force (TF) WEEE and RoHS at Orgalime was intensified by EEEA in parallel with the ongoing process in EU which aim was to provide guidelines on understanding of specific provisions in both directives and their implementation on the industry level. Explanatory fiches were developed by task force at Orgalime engaging numerous experts from industry and association professionals in the Member states. Cooperation with European sector committees representing household appliances producers (CECED) and ICT industry (EICTA) and others was established. The issues considered were for example: the scope of the directives and the definition of producer (which are the same in both directives), further the specific issues in RoHS like maximum concentration values of restricted substances, exemptions to RoHS and other. The examination of the exemptions listed in the annex of the RoHS directive were analysed for which the procedure through TAC (technical adaptation committee) was foreseen in the directive itself and provided for adaptation to scientific and technical progress in the field of alternatives to hazardous substances. Several

proposals for new exemptions were presented and then presented to the Commission.

The awareness raising campaign on implementation process by EEEA in Slovenia has started with information leaflets to member companies in second half of the 2003 with seminars which finally led to the establishment of working group (WG) WEEE and RoHS at CCI. Companies from EE industry, distributors and retailers, importers have joined WG where also researchers from institutes (IJS) and the officials from responsible of the Ministry for environment, spatial planning and energy (MOPE) took part. The aims of the WG WEEE and ROHS in CCI were: exchange of information coming from above mentioned sources, than follow up of the explanatory fishes, discussion of proposed guidelines for implementation and also practical issues regarding preparation to compliance with directives. On top of that, close cooperation in the transposition and implementation process of both directives with authorities in Slovenia was established.

Several WG meetings took place in 2004 from March onwards, resulting to discussions on the draft proposals for WEEE and RoHS in September 2004, where positions of the industry and other economic operators were formed and presented to legislators.

Two meetings between economic operators and ministry officials discussing the outstanding implementation issues on WEEE were organised by the CCI. Two further meetings in CCI of WG WEEE and RoHS with MOPE discussing RoHS implementation have led to important changes in the initial draft of the ministerial decree regarding RoHS compliance assessment and surveillance. After transfer the responsibility for RoHS to the National Chemicals Bureau good cooperation was established.

This has resulted into regular exchange of information between Bureau and WG in periodical meetings, which are organised to follow up the developments regarding practical implementation, new developments on EU level regarding annexes to RoHS.

2.4. Participation in GrenRose project and further activities of WG WEEE/Rohs in Slovenia

The EEEA of CCI took part in 6.FP collaborative research multinational project GreenRose, where EEEA has - as an industrial association of SMEs the role to disseminate the knowledge and support to implement results of the research efforts in technology and processes with substitutions to hazardous substances among its SME members. Good cooperation is established with IJS both in the promotion of RoHS themes as well as in the work of WG WEEE RoHS.

While the date of the ban 1. 7. 2006 for products containing hazardous substances for the placement on the market is approaching quickly, the practical issues regarding

the changes to new products without hazardous substances in supply chain between companies are still to be solved. After officially established maximum concentration values of the banned substances by EU Commission lately, the conformity assessment issues with RoHS provisions are in the focus of interest and also the proposals for new exemptions. In many cases the proposals for exemptions are based on practical issues (specific ICT components which are in use but will not be available in lead free technology) and- if not adopted - could harm competitiveness of important segment of industrial SME. One of the most important issue in national level is to build up the guidelines for B2B communication in supply chain on the components and materials which are to comply with RoHS provisions.

Environmental friendly product design and substitution of hazardous substances in electronic and electrical equipment is one of the main purpose of the lately adopted directive establishing framework for eco-design of energy using products (EuP) promoting life cycle approach in designing new products and represent a step towards integrated product policy. EEEA of CCI is already actively involved in promoting methodology for product design within the EU project "Awareness raising campaign for electrical and electronic SME " with Fraunhofer IZM Institut Berlin. A successful workshop with large number of participants was organised in CCI in Ljubljana in May 2005.

3. Conclusion

Implementation of EU legislation which has a strong influence on technology and production processes as well as directly to the market access for SME in industry, is demanding task for industrial associations.

Having the opportunity to follow the WEEE and RoHS legislative process and consequently its technology implications: in research area, on technology, production processes and on competitiveness of SME, has enabled EEEA to understand the mechanism of the whole process, role of stakeholders in it, and above all the role of associations and tasks to be accomplished. Understanding of the EU legislation process and active participation in it, is essential for building association competence in the implementation phase on the member state level as well as supporting SMEs in solving problems and other practical issues.

Summarising the stages in the process with the relative tasks and activities the following points could be considered as important and/essential:

- collecting early information on legislative initiatives on EU Commission level (possible participation in "regulatory Impact assessment procedure " is crucial)
- EU federations are important source of information, giving opportunity to share the views and positions, also to actively influence the process both in preparing positions to proposals within Commission service activities as well as in the parliamentary process and

other decision making levels or bodies (EU Council, COREPER...) Active response and expert support from companies is also important for credible participation in the process.

- Gathering "early information" and exchange of information through the adoption process of directives on EU level is important for the competence needed in the implementation phase on national level later on.
- Cooperation with national authorities in both phases (EU adoption process and implementation) should be based on partnership and shared responsibility.
- building - up competence is connected with acquisition of specific knowledge (e.g. like in the case of RoHS where new research activities are essential part of the implementation), at the same time the exchange of good practices, bringing together all relevant stakeholders are essential in such cases where new technology is involved.

New developments in EU industrial policy promoted by EU Commission is strongly connected with research and technology development in much faster rate than before. Sustainable development policy is of highest importance and

means for industry searching for new products, where environmental issues are essential. This is proven by many regulatory concepts, one of them is framework directive known as "eco_design of energy using products" which is providing new challenges for electrical and electronics industry, perhaps also on a global scale.

Janez Renko
director

Electrical and electronic engineering association
Chamber of Commerce and Industry of Slovenia
Dimičeva 13; SI-1540 Ljubljana;
janez.renko@gzs.si

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