

PRESS RELEASE

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NVMP launches hunt for rare earth metals

Smarter product design enables recycling industry to recover more

If electronics are designed differently in the future, more rare earth metals and other critical raw materials can be recovered from them after use. This is the conclusion of research commissioned by Association NVMP (the Dutch Association for the Disposal of Metalelectro Products), which was presented yesterday. The research shows that a smarter product design, geared to careful separation and the best available recycling technologies, can recover more of these essential raw materials.

NVMP, which is responsible for the collection and recycling of discarded electronic appliances in the Netherlands, wishes to present four recommendations to stimulate product designs that use raw materials efficiently. According to the association, the following steps are necessary:

1. Only formulate targets that are technically and economically feasible.
2. Make the use of certified best available technology mandatory for all market parties and enforce this so that avoidance and evasion can be prevented.
3. Work on international standards and objectives that also have an impact in the US and Asia, where many electronic appliances are designed and produced.
4. Organise open consultation and cooperation between the electronics industry, the collection process, the recycling industry and the scientific sector to promote a chain in which raw materials are used efficiently.

Together with the Government, NVMP will take the initiative to initiate this consultation structure in the Netherlands.

Critical supply of raw materials

At the *Design for Recycling* symposium on August 29, NVMP chairman Jan Kamminga presented a manifesto containing these recommendations to Paulus Jansen, chairman of the Infrastructure & Environment Commission in the Dutch Lower House. According to Jansen there is a broad consensus in the Lower House on the need for more raw materials to be recovered from e-waste. He promised to put this topic on the agenda of the Environment Commission.

The recovery of steel, copper, plastic and the other commonly-used substances from discarded electronics is well organised in the Netherlands. But this is not the case for materials such as indium, tantalum, antimony, palladium and earth metals that are used in small amounts and in complex compounds, which are

usually lost even during the very latest recycling processes. These substances are rare or are only available in limited amounts, yet they are essential for the functionality of modern electronics.

Adaptation of the working method in the chain in order to recycle more high-quality materials is a long-term process, says Kamminga. "This problem cannot be solved with new recycling technology. The solution is to adapt the design of different types of appliances. We'll only see the results of that in the long-term recycling figures."

Practical empirical rules

At the symposium, Dr Antoinette van Schaik of research agency MARAS presented ten empirical rules, based on detailed research, for the practical implementation of product designs that use raw materials efficiently. This mainly involves mapping out and quantifying the practical and economically feasible options using process simulations that show which combinations of raw materials make recycling impossible and how this can be avoided. This can be achieved by choosing different materials or by physically separating the raw materials. Those recycling-friendly choices should be integrated into the CAD/CAM systems of the product designers so that they can combine the recycling preferences with all the other requirements related to functionality, design and costs.

Up to this point, the EU regulations for product design, the Ecodesign Directive, focused mainly on energy-saving appliances and lighting. In a second directive, Restriction of Hazardous Substances Directive (RoHS), the use of a number of toxic substances is prohibited or restricted. There are hardly any relevant design regulations that focus on recycling and the efficient use of raw materials.

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Appendices:

- Manifesto for product designs that use raw materials efficiently, Association NVMP
- 10 Fundamental Rules & General Guidelines for Design for Recycling & Resource Efficiency, MARAS

About Association NVMP:

Association NVMP was founded in 1999 and represents 1,600 producers and importers of electric and electronic appliances and energy-saving lighting equipment in the Netherlands. These producers and importers set up the nationwide system for the environmentally-friendly collection and the sustainable processing of discarded appliances and lighting. The implementation of these activities is the responsibility of non-profit organisation Wecycle.

For more information: www.nvmp.nl