

To:  
Öko-Institut e.V.  
Carl-Otto Gensch  
[rohs.exemptions@oeko.de](mailto:rohs.exemptions@oeko.de)

## Contribution to Stakeholder Consultation 2015-3 - Joint Revaluation of Two Requests for Exemption, First Reviewed in 2013-2014, Related to Cadmium Quantum Dot Applications

The SE CA regrets that a final decision is still lacking for the exemption requests for cadmium in quantum dots. Any further delay will prolong the possibility to set on the market equipment containing elements made by quantum dot technology that contains cadmium.

We suggest that the applications for exemptions are refused and that the existing exemption 39 is terminated as fast as possible according to the rules in the RoHS directive. Since the products were not introduced at the EU market at the time for application/reapplication for an exemption, the transition time for the current exemption 39 should be shortest possible (12 months). The intention must be to avoid a risk for an expanding market of cadmium containing products in the EU, but consider that the shortest possible transition period acts as a clear signal that such products should not be introduced on the EU market.

As described in the questionnaire for this consultation “*The two applicants originally requested exemptions with different wording formulations, however in the course of the first evaluation it was understood that both exemptions are to allow placing Cd QD technologies on the EU market in various products.*” Thus our contribution includes joint comments on both applications, but only on questions 1b, 2b and 5 in the questionnaire.

***Question 1 d. Please explain why you either support the applicant’s request or object to it. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a) to support your statement.***

We object to the requests from the applicants to exempt the use of cadmium in quantum dot technology because:

- There are available substitutes free from cadmium both for quantum dot technology and for other technologies that provide the same basic function to the relevant equipment. This has e.g. been explained by other stakeholders (DOW, Nanoco Group PLC, NDF Special Light Products B.V.) in public consultations on the exemption applications.
- Article 5.1.a in the RoHS directive reads “*inclusion of materials and components of EEE for specific applications in the lists in Annexes III and IV ...*”. We do not find an exemption for general use in lighting or displays fulfils the requirement regarding “specific applications”. It is not mentioned in the applications that there are specific equipment that could not be set on the market if the exemption requests are rejected. There will

still be televisions, monitors, tablets and cell-phones as well as light bulbs free from cadmium available for sale.

- If there is equipment for a specific application where the quantum dot technology with cadmium is necessary to set this type of equipment on the market, new applications should be submitted particularly for that equipment.

***Question 2 b. Please state if you agree with the detailed parameters mentioned by the three actors as relevant for enabling a comprehensive comparison of performance of the technologies (general performance and environmental performance); Please explain your views and if relevant specify other parameters that should be considered.***

We disagree with the way the functional parameters are defined because the question is based on incorrect premises. Exemptions shall be given for “specific applications”, not a specific technology. A definition of the functional unit should start with a specific equipment from one of the categories in Annex I of the RoHS directive. Since there are cadmium free televisions, monitors, tablets and cell-phones as well as light bulbs available for sale, this specific technology is not crucial for the basic lighting function of those kind of equipment. Thus all claims regarding functions should be made in relation to a specific equipment. If necessary in various equipment, multiple exemption applications may be submitted for the function of such equipment.

***Question 5. The applicants and a manufacturer of a substitute candidate have provided information as to the compounds used in Cd-free and Cd-based technologies relevant to the exemption requests, and as to their potential hazardousness and toxicity. Please state with which of the views presented you agree or disagree and explain why;***

One of the applicants state that “Furthermore, the cadmium in the QD-LCD can be recovered safely by recycling whereas the cadmium and other toxic metal emissions from power generation contaminate the environment, enter the food chain, etc.”

The safety in the recycling process seems to be highly overestimated by the applicant. The described safe recovery of cadmium from displays and light sources in electronic waste requires that the workers have knowledge about which of the parts that contains cadmium when recycling takes place. Since there are no such systems for transmission of information, it will not be possible to ensure that such safe recovery will occur.

### ***Other comments***

Without a reapplication exemption 39 would have expired already 1 July 2014. For reasons described above, we can see no reasons to extend the existing exemption or introduce any new exemption for cadmium in quantum dots. As the requests already have been processed by the consultant, the RoHS expert group, the commission and finally got a negative opinion by the members of the parliament, we find that all remaining and necessary activities should be finished as fast as possible.