Consultation Questionnaire Exemption No. 4(f) of RoHS Annex III

Current wording of the exemption:

Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex

Requested validity period: Maximum (5 years and 7 years (cat. 8 and 9) respectively)

POSITION OF ÖVGW - AUSTRIAN ASSOCIATION FOR GAS AND WATER

1. VDMA and LightingEurope requested the renewal of the above exemption for the maximum validity periods with the same scope and wording for all EEE of cat. 3 and 5 (VDMA) and cat. 1-10 (LEU).

   a. Please let us know whether you support or disagree with the wording, scope and requested duration of the exemption. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a).

OVGW supports the wording, scope and requested duration of the exemption required by Lightning Europe and VDMA with regards to the usage of mercury-vapor discharge lamps for UV disinfection of drinking water.

Drinking water utilities have to provide wholesome, safe and clean Drinking Water, according to the requirements of EU Drinking Water Directive (DIRECTIVE (EU) 2020/2184). In some cases, it is necessary that water abstracted from groundwater resources must be disinfected to meet the microbiological requirements for drinking water. UV-disinfection is widely used in Austria and has proven to be very effective to prevent water associated infections.

According to national law, Austrian drinking water utilities are only permitted to use approved treatment technologies and treatment chemicals. UV-irradiation is one of the approved disinfection technologies, listed in Austrian Codex Alimentarius, Chapter B1 Drinking Water.

Moreover, ÖVGW provides a certification program for products in drinking water supply, including UV-devices with Hg-vapor discharge lamps. The testing and subsequent certification of water disinfection devices are based on Technical Rules and Standards elaborated and updated by ÖVGW to ensure the safety and efficiency drinking water disinfection (ÖVGW W 107). The respective technical specifications for UV drinking water disinfection devices equipped with either low pressure or medium pressure Hg-vapor lamps are laid down in the Austrian National Standards ÖNORM M 5873-1:2020 and ÖNORM M 5873-2:2003.

If applicable, please suggest an alternative wording and duration and explain your proposal.

If it is intended to subdivide Annex III, Exemption 4 (f), as suggested in the *"Study to assess socioeconomic impact of substitution of certain mercury-based lamps currently benefitting of RoHS 2 exemptions in Annex III – Final Version",* July 2019, Öko-Institut e. V., we advocate the wording 4(f), VII, "*Mercury in low pressure and medium pressure discharge lamps emitting light mainly in the ultraviolet spectrum for disinfection of drinking water*".

2. Please provide information concerning possible substitutes or elimination possibilities at present or in the future so that the requested exemption could be restricted or revoked.

   a. Please explain substitution and elimination possibilities and for which part of the applications in the scope of the requested exemption they are relevant.

Drinking water utilities look forward to further development of current state of the art techniques. However, alternatives for Mercury-vapor UV lamps, such as LEDs emitting microbicidal effective UVC radiation, are to date at the development stage and cannot currently replace Hg-vapor discharge lamps. For disinfection purposes of drinking water at large scale this technology is not yet mature, due to low radiation output and the short lamp life compared to visible Light-Emitting Diodes as well as missing technical standards for validation and operation. We assume that at least another 5 to 10 years of development time will be needed for manufacturers to use LED lamps for this field of application on a large scale on the commercial market. It has to be emphasized, that technical standards to assess, operate and surveillance of the performance of UV LED systems in drinking water disinfection applications are not available, which are a basic requirement for the approved application for public drinking water supply.

It has to be kept in mind that even in case that UV LED technology will be available in future for regular drinking water disinfection Hg-vapor lamps cannot be simply replaced by LEDs in existing disinfection installations in the water works, as they represent completely different technologies. For already existing devices, this would have the consequence to renew the entire installation, which would lead to substantial costs for municipalities and water suppliers. To the point: Hg-vapor lamps cannot be just unscrewed and replaced by UV LED lamps in existing water disinfection devices.

   b. Please provide information as to research to find alternatives that do not rely on the exemption under review (substitution or elimination), and which may cover part or all of the applications in the scope of the exemption request.

OVGW cannot provide information on this matter.

   c. Please provide a roadmap of such on-going substitution/elimination and research (phases that are to be carried out), detailing the current status as well as the estimated time needed for further stages.

OVGW cannot provide information on this matter.

3. Do you know of other manufacturers producing devices of comparable features and performance like the ones in the scope of this exemption request that do not depend on RoHS-restricted substances, or use smaller amounts of these substances compared to the applications in the scope of this exemption?

4. As part of the evaluation, socio-economic impacts shall also be compiled and evaluated. For this purpose, if you have information on socioeconomic aspects, please provide details in respect of the following:

As stated above: In the case of already existing UV devices, the replacement by alternative UV radiation sources would force water utilities to renew the entire installation, which would lead to substantial costs for the public water utilities and municipalities.

5. Any additional information which you would like to provide?

Austria's current regime of tested and certified UV-devices with Hg-vapor lamps works efficiently and legally sound for the drinking water sector. In contrast to disinfection processes based on chemicals (e.g. chlorine) UV irradiation represent an environmentally friendly disinfection technology. To date, the OVGW certification system comprises 83 types of certified UV-devices, reflecting the different needs of Austria's (for the most part small) drinking water utilities. OVGW certificates for UV-devices include the demand for certificate holders to provide a recycling strategy for used Hg-vapor lamps. This ensures that the used lamps are disposed of and recycled safely following the principle of the circular economy. .

Please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that the project team can contact you in case there are questions concerning your contribution.

For further information, please contact DI Anna Pomassl, pomassl@ovgw.at