

Information about Annex A (Japan)

I. Batteries

Information was collected through interviews with Battery Association of Japan (BAJ). Share of BAJ's member companies is about 95% of domestic shipment for both silver oxide batteries and zinc-air batteries.

- BAJ's member companies have already completed the replacement of mercury-added button zinc silver oxide batteries and button zinc air batteries with mercury-free products; therefore, we have no problem with regards to the addition of these two types of batteries to Annex A.
- Regarding mercury-free button zinc air batteries, though there used to be a challenge on the risk of rupture and leakage due to the removal of mercury which has a function to prevent the gas generation, hearing-aid manufactures have started to use the mercury-free zinc-air batteries since the technological advancement enabled them to ensure its safety.
- When adding button zinc silver oxide batteries and button zinc air batteries with a mercury content less than 2% to Annex A, a definition of "products not containing mercury" is required. In such a case, it is desirable that 5 ppm would be used as a detection lower limit, which is already provided under the EU Batteries Directive and widely and generally used in the battery industry.

II. Lamps

Information was collected through interviews with the Japan Lighting Manufactures Associations (JLMA). Share of JLMA's member companies is more than 97% of domestic shipment for florescent lamps for general lighting purposes.

Fluorescent Lamps

- Fluorescent lamps exempted from the phase out under the Convention include linear fluorescent lamps of 110W and many types of compact lamps. The number of the exempted lamps accounts for about half of the total production.
- The amount of mercury used in a fluorescent lamp produced by the JLMA members has been declining. In 2018, the average amount of mercury per florescent lamp for general lighting purposes was 5.8 mg. Fluorescent lamps for general lighting purposes listed in Annex A have already been regulated since 2018 under the Mercury Pollution Prevention Act of Japan, as opposed to phase-out date of 2020 provided in the Convention. As of the end of 2017, the JLMA members have already achieved a reduction of mercury content in their products lower than the level stipulated in Annex A.
- In regards to electrodeless fluorescent lamps, which are not regulated under the Convention, there is a possibility that some exist for maintenance purpose, but in a very small quantity.
- The domestic production of CCFL and EEFL has been terminated, and it is assumed that they are rarely distributed, even for maintenance.
- For fluorescent lamps, replacement with LED has progressed, and it is considered that the amount of mercury used domestically in these lamps will go on decreasing.

HID Lamps (General term for high pressure mercury vapor lamps, metal-halide lamps and high pressure sodium vapor lamps)

- Regarding lamps for special and industrial purposes exempted from the Convention, it is impossible to replace these with LED lamps for certain purposes in the fields of medical equipment and measuring instruments due to performance problems. Regarding industrial use, it is assumed that manufacturers

have been considering replacement with LED lamps; but it is technically difficult at present.

- There is no alternative technology for low pressure mercury lamps (mercury content 15mg per lamp) and high pressure mercury vapor lamps (discharge lamps for other special purposes), which are not currently regulated under the Convention.
- Among the HID lamps for general lighting purposes, metal-halide lamps, which are currently not subject to restrictions under the Convention, have mercury-free types. Technology to produce ceramic/metal halide lamps was developed about 10 years ago, and mercury-free technology for these products has been partially established. However, due to replacement with the LED technology, mercury-free technology for these lamps has become no longer necessary, and it has led to a pause in technology development.
- HID lamps for general lighting purposes will be gradually replaced with LED lamps.