

Proposals into regulatory legal acts on WEEP and mercury containing lamps in the Republic of Kazakhstan

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The Waste situation (1)

- Waste from electrical and electronic equipment (WEEE) is steadily increasing worldwide
- WEEE contains valuable materials

BUT

- WEEE contains also hazardous substances which endanger human health and environment
- Laws and regulations are necessary to encourage recovery of resources
- and safe treatment
- Also regulations are required to reduce or ban hazardous substances contained in the equipment from the beginning



The Waste situation (2)

- EU and other countries have established regulations concerning proper management of WEEE
- EU also created legislature to extend the product responsibility of the producer to the management and financing of WEEE („Extended Producer Responsibility“ – EPR)
- RK is currently considering to introduce such legislation on the EPR principle for Management of WEEE in Kazakhstan adapted and streamlined to Kasakh reality and circumstances



RoK objectives of WEEE legislation

Assumptions:

- Adapt and optimize legislation according to RK situation
- Regulate the recovery and proper treatment of WEEE
- Prohibit or minimize emissions of hazardous substances during and following treatment of WEEE
- Reduce and /or minimize the use of hazardous substances in the production of EEE, especially mercury containing lamps.
- Secure adequate financing of recovery and treatment through the EPR principle
- Encourage producer initiative to reduce the use of hazardous substances in the design and production of future EE products and improve recyclability.
- be a milestone in the RK program of “Green Economy 2050”



Challenges for WEEE legislation in RK (1)

- WEEE legislation must be harmonized with the overall waste legislation of RK
- WEEE legislation should protect human health and environment as well as encourage development of qualified waste management and recycling infrastructure
- existing separate household waste collection and treatment in RK is still in the first stages of development and offers little support for WEEE recovery



Challenges for WEEE legislation in RK (2)

- Management of valuable recyclables in household waste (like valuable WEEE, metals, etc) in to a large extent is in the hands of informal sector which must be integrated in the new regulations
- Due to hazardous substances within WEEE only qualified business operators may be authorized to deal with such operations
- Proper steps must be taken to educate consumers on importance and correctness of WEEE separate collection



Required legal chapters

1. Principles of regulation
2. Definitions
3. Targets
4. Responsibility of producers and importers
5. Responsibility of municipalities
6. Responsibility of Producers Responsibility Organizations (PRO)
7. Authorization of PRO
8. Reporting and auditing responsibilities
9. Data reporting
10. Regulations concerning sales and treatment WEEE containing hazardous substances , including mercury containing lamps
11. Sanctions



1. Principles of regulation (2)

- Collection of WEEE should be done mainly by the municipalities, defined drop off station or dealers at no cost for the consumer; the incurred costs should be carried by the obliged industry
- Existing collection and recycling structure and industries should be integrated as much as possible (e.g. the informal sector etc)
- Participation of obliged industry must be assured; free riding kept at a minimum.
- Distortion of the markets between producers, importers should be avoided, also vertical integration in the waste operator market should be to support maximum free competition
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1. Principles of regulation (1)

- Regulation should establish a proper recovery and recycling of WEEE in RK following the principle of Extended Producer Responsibility
- Consequently financing and managing recovery and treatment of WEEE should be done by the producers and importers of such equipment (obligors)
- EPR should as well as influence product development for easier recyclability and the omission of hazardous components in the products as much as possible.



1. Principles of regulation (3)

- Obligors may delegate the fulfilling of their obligations to a Producer Responsibility Organisation authorized for this undertaking by the Ministry of Environment (aPRO)
- Authorization procedure should ensure proper functioning and financial ability of such a system to perform these tasks
- Export of WEEE should only be permitted to countries where treatment of equipment under the same standards as required by RK legislation can be proven



2. Definitions

- Recovery and treatment differ considerably between the different products within WEEE.
- Therefore, major categories of EEE should be defined to enable control and progress monitoring
- We propose a moderate depth of definition categories to minimize administrative efforts:
- For reasons of compatibility and simplification we propose to take over the content definitions of the EU Directive 2002/96/EC and 2012/19/EU.
 1. Large electrical equipment (e.g. washing machines etc.)
 2. Small electrical equipment (e.g. shavers, toothbrushes)
 3. Coolers and Freezing appliances
 4. TV and monitors, communication equipment
 5. Batteries
 6. Lamps



3. Targets

- Principally, recovery and recycling targets are required in order to ensure system implementation, as guidelines and milestones to measure progress and as well as a trigger point for a more stringent regulation should the planned one be unable to reach the set goals
- For target setting the current state of the development of recovery and recycling infrastructure in the RK must be taken into account.
- Current target in the EU is 4 kg/inhabitant/per year of collected and recycled WEEE and was recently increased to 45 kg/inhabitants/per year starting in 2018.
- We propose on account of the current state of recovery and recycling in the RK and the lack of data not to set a specific target in the upcoming regulation
- Regulation should, however, include that a recovery and recycling target will be set following a review process in 2 years.



4. Responsibilities of producers

- Producers and importers of EEE in RK have to be obliged to take back WEEE of those categories they put on the RK market
- to ensure it is recycled properly at no cost for the consumer.
- to report the sold volumes per category to the state authorities

OR, should they not be able or willing to do this,

- To transfer these responsibilities to a government authorized PRO (aPRO), through a signed contract
- To pay the fees set by the aPRO according to category and volume of equipment they put on the market



5. Responsibilities of municipalities

- Municipalities will have to take back WEEE at no cost from the consumer
- Must store them properly until they are taken over by obliged producers or the aPRO.
- The costs for these activities have to be agreed on with the aPRO and will be refunded to the municipalities by the aPRO.



6. Responsibilities of an authorized Producer Responsibility Organisation (aPRO) (1)

- aPRO must be a registered business company following the RK law
- PRO owners must be producers and importers only, to avoid vertical integration in the waste management market and conflict of interests
- PRO must apply and obtain authorization from the Ministry of Environment before it is legally able to take over WEEE related obligations from the producers and importers. The law must establish quality and quantity criteria PRO must meet in order to receive authorization (license).
- PRO must sign contracts with obliged industry to take over their obligations and provide compliance against payments of fees for the volume and category of products put on the market by each company.



6. Responsibilities of an authorized Producer Responsibility Organisation (aPRO) (2)

- fees must be calculated based on the anticipated costs of collection and recycling per each category on a yearly basis and must reflect true costs without any cross subsidies
- The fees must be published and set at least until October for the next year to enable the industry to calculate their selling prices properly.
- PRO must offer the same conditions and prices to all customers and accept all companies obliged by the law as customer.
- PRO must close contract with municipalities and transport companies for collection and transport of WEEE, dismantling companies and recyclers, who qualify to treat WEEE within the existing legal standards.



6. Responsibilities of an authorized Producer Responsibility Organisation (aPRO) (3)

- PRO must take over all collected materials from municipalities and other collection points and ensure proper recycling. It must control quality of recovery and treatment through regular controls.
- For authorization the PRO must reach a target of recovery of at least 5% of total volumes placed on the market in year 2 as proof of functionality; if not, the Authorities may revoke the authorization.
- The PRO must undertake to inform and educate the consumers about the environmental benefit of WEEE collection and the best way for them to dispose of WEEE.



6. Responsibilities of an authorized Producer Responsibility Organisation (aPRO) (4)

- PRO must regularly perform audits of their customers to ensure correct volume reporting and payment to avoid free riders and protect payers.
- To enable control of the system by the Authorities the PRO must report data on contracted customers and EEE weights and collected and recycled WEEE weights to the authorities:
 1. The volumes per EEE category submitted by its customers to enable audits and controls of producers and importers.
 2. The volumes of recovered and recycled WEEE per category to evaluate targets achievements.



7. Authorization of a PRO (1)

- PRO must submit a request for authorization to the Authorities.
- It may not offer compliance to obliged industry without such authorization.
- The authorization should be given for at least 5 years to give sufficient investment security for PRO.



7. Authorization of a PRO (2)

Main requirements to obtain authorization

- A description of PRO planned strategy
- A sufficient number of contracts with obligors to prove sufficient economic potential (10% of total markets at the point of application for authorization, 30 % after one year of operation)
- Contracts with municipalities to ensure collection capabilities (with at least 10 municipalities covering at least 20 % of the population)

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7. Authorization of a PRO (3)

Main requirements to obtain authorization

- An operational and financial plan showing estimation of EEE volumes to be contracted and forecast of incomes, estimated costs of collection, transport and treatment operations for the first 3 years.
- A sufficient number of contracts with qualified recycling companies capable to properly treat and recycle the collected materials
- A consumer education plan

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8. Reporting and auditing responsibilities

- Producers and importers and PRO must report the volumes of equipment put on the market by categories and of the recovered and recycled material to Authorities
- the responsible Government authorities must regularly perform audits of the obliged industry companies to ensure full participation. Audits should start in year 2 following the law implementation.
- Experience shows that audit costs will be overcompensated by income of fines for non-compliance.
- Authorities also audit the dismantling, treatment and recycling companies on a regular basis.
- To complete the data structure the PRO should also report the results of its own audits to authorities.



9. Information management

Authorities should set-up a registry to manage the regulated incoming data streams and create a sound basis for audits and sanctions:

- information on weight of EEE released to the market reported from producers and importers
- WEEE weight collected and recycled reported from aPROs and producers and importers



10. Regulations concerning sales and treatment WEEE containing hazardous substances, including mercury-containing lamps (1)

- WEEE contains a number of hazardous substances which require proper treatment
- Components which contain more than 0.1% by weight of lead, mercury, hexavalent chromium, polybrominated biphenyls(PBB) or polybrominated diphenyl ethers (PBDE) in each homogeneous material or more than 0.01% by weight of cadmium in each homogeneous material are banned in most legislature
- Exceptions exist where the current manufacturing process or design requires some of these substances.
- Lamps containing mercury are to a large extent covered by these exemptions..



10. Regulations concerning sales and treatment WEEE containing hazardous substances, including mercury-containing lamps (2)

Waste treatment legislation exists in most countries, and regulate:

- Storage and transport
- Treatment areas
- Removal of defined substances
- Selective treatment of materials
- Refrigeration circuits and insulation treatment
- Mercury containing lamps



10. Regulations concerning sales and treatment WEEE containing hazardous substances, including mercury-containing lamps (3)

- Example of regulations regarding discharge and background lamps, mercury (Austria , Germany):
- The lamps should be dismantled before crushing.
- The fluorescent substances including mercury should be removed from the crushed lamps by a dry mechanical process. The residual mercury contamination must not exceed the limit value of 5 mg/kg dry mass.
- Fluorescent substances including mercury are disposed of in a secure way (e.g. secure underground storage)



10. Regulations concerning sales and treatment WEEE containing hazardous substances, including mercury-containing lamps (4)

Large discharge lamps containing mercury in larger quantities can be treated with the objective to recover the mercury content. We propose that this section should be reviewed with RK experts to establish realistic limits, also considering the existing treatment methods in RK.

A more radical solution would be to take over the EU RoHS regulations with those exceptions required by the RK environment and industry.



11. Sanctions

Participation of all obligors is essential for the success of such a regulation.

The Authorities must therefore not only perform the mentioned audits but also sanctions and penalties in case of non-conformity

Some proven examples:

- Non conformity of obligors: fine to be paid to the authorities at least 10 times the fee which would have been due at correct behavior, or 3% of revenue from EEE of the audited year
- Non-conformity of PRO: set period of repair, repeated failure will revoke the authorization

