Third Meeting of the EEC Subgroup on Business Facilitation

Agenda Item 3 : Regulatory Impact Assessment study on Product Responsibility Scheme

Purpose

This paper presents the findings of a Regulatory Impact Assessment (RIA) study on the proposed Product Responsibility Scheme (PRS) on waste vehicle tyres and dry rechargeable batteries.

Introduction

2. The RIA on the proposed PRS was commissioned in October 2003 and is now at the final stage. The purposes of the study are to review alternative means for achieving better management of waste dry rechargeable batteries and vehicle tyres through the introduction of a PRS. Important considerations are cost-effectiveness, impact on the trade and other stakeholders and the study has entailed a thorough economic analysis, and extensive stakeholder consultation.

PRS on rechargeable batteries

3. Batteries are manufactured from a wide range of materials some of which have been identified as hazardous. As a consequence, many jurisdictions have introduced programmes to minimise the effects from the manufacture and eventual disposal of batteries. These programmes have taken different forms. Initially a major focus was the removal (for all practical purposes) of mercury from batteries. As a result, most primary batteries marketed nowadays have no added mercury. It has not been proven technically and commercially feasible to remove all hazardous or toxic materials from rechargeable batteries, though the level of risk has been reduced substantially by development of new less harmful technologies.

4. In view of these residual hazards, more recently the thrust has been to divert batteries from landfills (or incineration in some countries). In Hong Kong the great majority of portable and consumer batteries are disposed along with other household and workplace waste and finish up in landfills. While a modern engineered landfill is fitted with liner systems to collect the leachate containing chemicals from the waste, some escape of leachate over

time is considered almost inevitable. To reduce risks to the environment and conserve the natural resource, the following options have been considered to divert waste dry rechargeable batteries away from landfills.

Option (A): Levy on new batteries –

- A levy imposed on the import of new rechargeable batteries (including those contained in devices) for use within Hong Kong to fund improved management of waste batteries;

Option (B): Voluntary scheme operated by industry –

- Industry (importers of rechargeable batteries and importers of devices containing rechargeable batteries) to operate a rechargeable battery recovery and recycling programme voluntarily; and

Option (C): Mandatory scheme operated by industry –

- Industry is required to recover and recycle their rechargeable batteries.

Cost-benefit analysis

4. It is estimated that about 325 tonnes of waste dry rechargeable batteries generated in Hong Kong are disposed of at our landfills each year. Rechargeable batteries contain harmful substances that could impose adverse effects on public health and the environment. Cadmium in nickel cadmium rechargeable batteries is known to present harmful and irreversible effects to humans and its toxicity presents other public health risks. Disposing of these batteries in landfills increases these risks.

5. To reduce these health and environmental risks, dry rechargeable batteries would, ideally, be diverted from the landfills and recycled in an environmentally sound manner. All of the options considered will require collection, sorting and shipping of these batteries to waste facilities overseas for recycling. Valuable materials (such as nickel and cobalt) would be recovered and conserved.

6. It is not possible to reliably quantify the benefits that will arise from this scheme and so a pragmatic approach is preferred with the recovery targets based on what might be achieved through best efforts of those involved.

7. Among the three options, Options (A) and (C) require regulatory support and Option (B) is a voluntary scheme. Option (B) would be less expensive than the other two options since the resources required for levy collection and ensuring compliance of the industry would be avoided. The Consultant estimates that with Option (B) a significant programme would be achieved with an expenditure of roughly $3M each year. Achieving the same outcome with the other two options would cost more than $4M per year. Industry will be free to determine how to implement the scheme with nominal targets agreed for the percent of dry rechargeable batteries collected and shipped to overseas facilities. This option can be implemented quickly to bring about early environmental benefits. A more detailed breakdown of cost for different options is given below:

Costs for each option ($/year)

	Option A	Option B	Option C
Collection	1,219,000	1,219,000	1,219,000
Transport	338,000	338,000	338,000
Recycling (net)	88,500	88,500	88,500
Administration	250,000	250,000	250,000
Communication	300,000	300,000	300,000
Common costs total	2,195,500	2,195,500	2,195,500
Regulation	1,650,000	-	830,000
Transaction costs	-	1,000,000	1,000,000
Levy collection logistics	200,000	-	-
Grand total	4,045,500	3,195,500	4,025,500

Recommendations

8. The Consultant recommends Option (B) as it has a number of advantages. It can be quickly implemented, avoids the expenditure on regulatory monitoring and enforcement and empowers industry to deal directly with the problem. The risk in adopting the voluntary scheme is whether it will be effective. If, in the future, the recovery of batteries is below expectations, the Consultant recommends that Government consider implementing Option (C) in which Industry would be subjected to the regulatory controls aimed at ensuring an effective scheme.

PRS on Vehicle Tyres

9. It is currently permissible to dispose of used vehicle tyres at landfills. This takes up valuable landfill space. Waste tyre generators engage

contractors to collect and cut the tyres into halves before disposal. Some used tyres are illegally fly-tipped adversely impacting visual amenity and posing fire and health risks to the community. Better management of waste tyres will conserve landfill space and reduce the incidence of fly-tipping. Recycling of waste tyres is one approach. Currently, the commercial value of products derived from recycling of waste tyres is significantly less than the cost of collecting and recycling, and so large scale waste tyre recycling is not viable. The following options all aim to introduce better management of waste tyres:

Option (A): Levy on vehicle licence fee

- A levy imposed on issue or renewal of vehicle licences. The levy will provide financial assistance for better management of waste tyres;

Option (B): Levy on new tyres

- A levy imposed on all tyres imported for local consumption for the same purpose as Option (A);

Option (C): Mandatory scheme operated by industry

- Industry (tyre importers) will be held responsible for managing the disposal of all waste tyres; and

Option (D): Landfill charge for tyre disposal

- A landfill disposal charge will be applied to all waste vehicle tyres delivered to the landfill thereby indirectly supporting waste tyre recyclers who charge for their receipt of waste tyres.

Cost-benefit analysis

10. The Environmental Protection Department estimates that around 18,000 tonnes of waste tyres were disposed of at the landfills in 2003. Apart from the direct cost borne by the waste tyre producers, the community is footing the bill for landfill disposal which includes both tangible capital and operational costs as well as their intangible environmental costs.

11. Overseas experience has shown that tyres can be processed for various uses. These include shredding waste tyres into rubber crumb for use in rubber products or as civil engineering materials. Tyres can also be used in the production of energy. The assessment made by the Consultant has revealed that, in the future, the overall costs associated with such processing would be lower than the overall cost of land-filling tyres.

12. Initial assessment indicates that the total cost of processing the aforementioned 18,000 tonnes of waste tyres would be around $15 million. In addition, in implementing the scheme there would be around $2.5 to 3.5 M expended in administration, including:

- for collecting levy and arranging tyre recycling (Options (A) and (B)),
- for monitoring the performance of the recyclers (Options (A), (B) and (D);
- for registration of importers and ensuring that they properly fulfil their responsibilities (Options (B) and (C));
- for the Industry's management of the scheme (Options (B) and (C); and
- tighter control of fly-tipping (Option (D)).

13. Some of the major benefits and drawbacks of these options are given below:

Option	**Major Benefits**	**Major Drawbacks**
A (*Levy on vehicle licence fee)*	• Simple to collect the funds • Industry does not bear any direct costs	• Unfair in that all vehicle owners within the same class pay the same levy regardless of the waste tyres they contribute
B (*Levy on new tyres)*	• Cost to consumers reflects their tyre usage	• Problems with free-riders (unregistered importers or unreported imports) • Require new resources to verify volume of tyres put into the local market by individual importers
C *(Mandatory scheme operated by industry)*	• Cost to consumers reflects their tyre usage • Tyre industry has flexibility in how it manages the waste tyres	• Problems with free-riders • Industry may not be cohesive enough to establish an effective body to run a collective scheme

Option	Major Benefits	Major Drawbacks
D *(Landfill charge for tyre disposal)*	• discourage disposal in landfill • provide recyclers with opportunity to charge additional fee for recycling	• The landfill disposal charge would encourage fly-tipping or other undesirable methods of disposal which may increase substantially

14. The cost and benefit analysis is yet to be finalised and the final recommendation would take into consideration the overall performance of the options in terms of cost-effectiveness, fairness and equity, views of the stakeholders (in particular, the concerns raised by the transport sector) and ability to reduce incentive for fly-tipping.

Presentation

15. The consultants will present to Members the assessment on these options in the coming meeting. Members are invited to comment on the options.

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