

# Food for Thought

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## **Energy Efficiency Policies and Its Impact on Hazardous Waste Generation**

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LETTER TO EDITOR - 30th JUNE 2013 (SUNDAY)

### **ENERGY EFFICIENCY POLICIES AND ITS IMPACT ON HAZARDOUS WASTE GENERATION**

Association of Water and Energy Research Malaysia (AWER) has conducted a case study on waste generation due to phase-out of non-energy efficient products. This case study focused on establishing a proper mechanism to ensure implementation of energy efficiency policies does not cause more environmental burden. It is a part of Sustainable Production and Consumption Project funded by British High Commission, Kuala Lumpur and the UK Government.

E-waste is defined as waste from the assembly of electrical or electronic appliances and categorised as SW110 according to Environment Quality (Scheduled Waste) Regulation 2005 under Environment Quality Act 1974 (EQA). Mercury containing wastes such as fluorescent tube and compact fluorescent lamp (CFL) are categorised as SW109. Based on Department of Environment's (DOE) report, generation of e-waste in 2008 was about 688,000 metric tonnes; and forecasted to be 1.11 million metric tonnes in 2020. However, waste generated from the introduction of non-energy efficient product's removal policies was not part of the estimation.

During the consultation process with members of public, most of the consumers are not aware of what happens if their e-waste or scheduled waste is collected by certain parties. When they purchase new product, the retailer refuses to take back the old or spoilt product. So does the waste collection company. Therefore, they resort to dump it somewhere or keep it. We have also met the industries as well as National Solid Waste Management Department (JPSPN) and DOE to review the current situation.

The following recommendations are vital to ensure implementation of energy efficiency policies does not cause environmental degradation.

***Recommendation 1: 'Cradle to Cradle' Approach***

Establishing Electrical and Electronic (E&E) products life cycle is vital in solving the waste management issue. Currently, 'Cradle to Grave' approach which is from resource extraction to waste disposal is mainly practised. We need to change it to reach the Resource Recovery process. This will 'pump back' resources into the manufacturing and create a cycle. We need to move away from linear consumption models like 'Cradle to Grave' approach as it depletes resources.

***Recommendation 2: Inclusive 'TAKE BACK' System Must Be Introduced***

Inclusive Take Back System must be implemented to include all types of waste in-flow that AWER has identified. The main waste inflows are retailers and manufacturers, solid waste management contractors, recycling centres, second hand product dealers as well as illegal dumping. For example, retailers and manufacturers can introduce rebate system to customers that return old product to buy new product. This can assist to capture large volume of e-waste and scheduled waste (with mercury).

***Recommendation 3: TAKE BACK System Costing Structure Must Be Developed***

The costing of managing e-waste and scheduled waste (with mercury content) must be managed jointly by industry, government and public. Control of profit via audited Capital Expenditure (Capex) and Operational Expenditure (Opex) need to be imposed. In addition to that, regional level plants and coordination will also help to ensure a good collection volume of e-waste or scheduled waste (with mercury). Coordination between Malaysia, Singapore, Brunei and Thailand can be seen as an immediate step to be considered. Higher volume of waste recovery keeps the cost low and a good success to the Take back system.

***Recommendation 4: Monitoring and Enforcement of TAKE BACK System***

E-waste and scheduled waste (with mercury) must be handled to prevent contamination and leaching throughout the collection, transportation, storage, partial recovery as well as full recovery premises and facilities that may pollute the environment instantaneously. Basic procedures must be developed and periodic monitoring is vital. AWER has also monitored some of the collection locations and identified many wrong doings as well as lack of awareness from stakeholders. JPSPN and DOE must ensure adequate information is available to assist both domestic consumers and businesses.

***Recommendation 5: Register Second-Hand Electrical and Electronic Products Dealers and Limit Age of Products***

The second-hand E&E products dealers must be registered by Energy Commission. These dealers will play a role in 'reusing' the E&E products or its parts. However, there are many concerns over what actually transpires such as safety issues, labelling, unused parts, etc. These products must at least fulfil basic safety standard and are recorded. A registration system will also control the second-hand dealers to ensure

no illegal dumping is committed after removing usable parts. In addition to that, there should also be age limit to products or parts that can be sold as second-hand. This step is vital to ensure middle income and low income groups are not burdened with inefficient products that cause higher electricity bills over a long period. Introducing inefficient second-hand E&E products into the market is against the objective of improving energy efficiency in Malaysia.

Our findings will also be shared with both JPSPN and DOE that has given full cooperation during the consultation process to establish our final outputs. Let us strive for a better and holistic energy efficiency policy implementation in Malaysia.

Piarapakaran S.

President

Association of Water and Energy Research Malaysia (AWER)

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