

**Lords Science and Technology Committee**  
**Sub-Committee I: Waste Reduction**  
**HP Submission: Waste Reduction, Eco-Design and**  
**Sustainable Procurement**

## **Introduction**

Hewlett-Packard (HP) is pleased to have the opportunity to make a submission to the House of Lords Science and Technology Sub-Committee Inquiry into waste reduction and welcomes the Committee's interest in this important area of environmental policy.

HP believes that sustainable development is not an option but an imperative. Environmental responsibility is an integral part of our offering and we are willing and able to differentiate ourselves in the market through our environmental responsibility programmes.

Our biggest environmental impact is through our products. As a result, HP developed its Design for Environment program over 10 years ago with the goal of reducing the environmental impact of products and services. In addition to meeting safety and regulatory requirements, our objective is to design products that use fewer materials, are more energy efficient, easier to recycle and therefore create less waste, while maximising overall value for our customers.

This commitment to environmental best practice leaves HP well-placed to respond to the questions raised by the Committee in relation to waste reduction. However, we recognise that this is a broad and complex issue. As a result we have focused our submission on two areas – sustainable procurement and individual producer responsibility – where we believe that the public sector has the power to make a lasting impact by incentivising manufacturers to reduce waste in their products and production processes.

## **Executive Summary**

In line with the Committee's suggestion, we have responded to the Inquiry by answering the questions set out. However the points we make are all related to two issues: sustainable public procurement and Individual Producer Responsibility.

### **Sustainable Public Procurement**

With a procurement budget of £1.5 billion, the UK public sector has the power to drive the market for more sustainable products and services. HP strongly believes the Government should reflect its commitment to environmental sustainability and waste reduction in its approach to public procurement.

By adopting this approach, the Government would provide an economic incentive for producers to develop products and practices with a lower environmental impact and provide market recognition for innovators such as HP.

### **Individual Producer Responsibility**

The principle of individual producer responsibility - where producers are responsible for the take-back and disposal of their own products at the end-of-life - is recognised as an important tool in encouraging the consideration of end-of-life management at the stage of product design.

Individual Producer Responsibility provides a competitive incentive for producers to design their products so that they are easier and therefore cheaper to recycle.

Collective producer responsibility - where all producers are jointly responsible for the recycling of all products, including the products sold in the future - does not provide an incentive to a producer to design products to be easier to recycle.

Within the EU 10 Member States (Bulgaria, Denmark, Finland, France, Greece, Latvia, Portugal, Slovenia, Spain, UK) have failed either to transpose or implement the Individual Producer Responsibility provisions (Article 8.2) of the Waste Electrical and Electronic Equipment Directive (WEEE Directive)

As a result the incentive to encourage producers to focus on design for recycling is absent. This jeopardises the attainment of the Directive's objectives.

**BUSINESS FRAMEWORK:** Does the current policy, regulatory and legal framework support and incentivise the development of better, more sustainable products and processes? How is this framework communicated to businesses and what is the level of awareness and understanding among businesses?

The European WEEE (Waste from Electrical and Electronic Equipment) Directive aims to stop the growing volume of electrical and electronic waste disposed of in landfill sites, by making manufacturers responsible for financing the recycling of end-of-life equipment.

Article 8.2 of the WEEE Directive establishes individual producer responsibility for the recycling of products put on the market after 13 August 2005. Individual Producer Responsibility (IPR) is a policy tool that provides incentives to producers for taking responsibility of the entire lifecycle of his/her own products, including end of life. Making each producer responsible for financing the end-of-life costs of their own-branded products enables end-of-life costs to be fed back to the individual producer. By modifications to the product design, the producer can directly influence the end of life cost.

Therefore individual producer responsibility is recognised as an important tool in encouraging producers to have regard to the end-of-life management of their products at the stage of product design. Individual Producer Responsibility provides a competitive incentive for producers to design their products so that they are easier and therefore cheaper to recycle.

Analysis has shown that 10 Member States (Bulgaria, Denmark, Finland, France, Greece, Latvia, Portugal, Slovenia, Spain, UK) have omitted the requirements of Article 8.2 in transposing the WEEE Directive into their national law. Instead, the legislation in these countries makes producers jointly responsible for the recycling of future products, making it impossible to implement individual producer responsibility. Another 4 Member States (Austria, Germany, Hungary, Poland) have only partially transposed the requirements of Article 8.2.

Without Individual Producer Responsibility these incentives for design improvements are lost. Producers are not rewarded for making their products easier to recycle as the end of life costs are related to market share of sales rather than the costs of end of life management of producer's products.

The EC Treaty obliges each Member State to implement the WEEE Directive in such a way as to give full effect, in legislation and in practice, to the wording, object and purpose of the WEEE Directive and not to put in place any measure that would jeopardise the attainment of the Directive's objectives. It is therefore crucial that the EU institutions and the Member States ensure that individual producer responsibility of Article 8.2 is correctly transposed and implemented in national legislation.

The WEEE Directive states that:

*"The establishment, by this Directive, of producer responsibility is one of the means of encouraging the design and production of electrical and electronic equipment which take into full account and facilitate their repair, possible upgrading, reuse, disassembly, and recycling"*

2002/95/EC: Recital 12

*In order to give maximum effect to the concept of producer responsibility, each producer should be responsible for financing the management of the waste from his own products.*

2002/95/EC: Recital 20

**BUSINESS FRAMEWORK:** How central is sustainable design to business thinking? What initiatives are in place to encourage this and are they meeting business needs?

As one of the world's largest IT companies, HP's greatest impact on the environment is through our products. HP is committed to providing products and services that are environmentally sound throughout their life cycles. Environmental impacts occur at every stage of the product life cycle: from product design, through manufacturing and transport, to use by customers and, finally, disposal at the end of a product's life.

Managing these impacts is a complex challenge as well as an opportunity. We apply design expertise to create innovative products and services with reduced environmental impact. This aligns with our customers' expectations of high performance, low cost and minimum environmental impact, and provides HP a potential source of competitive advantage. For example, flat panel displays, notebooks, multi-function handhelds and all-in-one printers use less material and are more energy-efficient than the desktop PCs and individual scan, fax, copy and print devices they replace for many customers. These newer products help reduce energy consumption, CO2 emissions and space used in transport, all of which result in lower environmental impact. HP ensures environmental design does not compromise other product requirements such as quality, reliability and price.

## **HP's Environmental Initiatives**

### **Design for the Environment (DfE)**

HP was a pioneer in developing a DfE program in 1992. Our DfE priorities are: energy efficiency, design for ease of recycling, and materials innovation.

Many HP products carry Eco-labels, such as ENERGY STAR, Blue Angel, Taiwan Green Mark, TCO, Canada Environmental Choice, China Energy Conservation Program, IT-Eco Declaration and PC Green Label.

61 business PCs, notebooks, workstations and monitors registered with the U.S. EPA's Electronic Products Environmental Assessment Tool (EPEAT) for public sector green procurement, including the industry's first Gold-level notebook

Environmental product stewards are integrated into product design and R&D teams throughout HP to identify, prioritize and recommend environmental design innovations.

### **Materials Reduction and Innovation**

Materials reduction helps HP reduce costs, decrease a product's environmental footprint, meet customer demands for smaller/more efficient products, and reduce recycling/disposal costs.

The DeskJet 3740 is one of a series of printers developed on a single platform and sharing common parts. This platform is projected to reduce materials use by more than 26,000 pounds over 4 years.

Several years ago, we removed polyvinyl chloride (PVC) from the case plastics of HP products, and we eliminated the use of two brominated flame retardants (BFR's), PBB and PBDE, and removed the remaining BFR's from the plastic housings of the majority of our products. HP eliminated all BFRs – including tetrabromobisphenol-A from external case parts of new HP brand products introduced after Dec. 31, 2006.

HP Office Recycled brand paper contains 30% post-consumer recycled paper fiber. In 2005, HP launched 100% post-consumer Office Recycled paper in Europe.

### **Packaging**

HP packaging innovations reduce materials used and increase the percent of recycled content. HP eliminates the use of heavy metals in packaging materials, and reduces the weight of packaging materials to decrease fuel consumption in transport.

Using high-density polyethylene for some camera packaging reduced unused space by 25%, increased quantity shipped per pallet by 50% and cut packaging materials use in half.

HP uses up to 85% post-consumer recycled content in external HP LaserJet print cartridge packaging and up to 100% post-consumer recycled content in external HP inkjet print cartridge packaging.

### **Design for Reuse and Recycling**

HP designs products that are easier to disassemble and recycle. Features include: modular design so components can be removed, upgraded, replaced and sorted for recycling; eliminating glues/adhesives by using snap-in features; reducing the number and types of materials used; using single plastic polymers; using moulded-in colours and finishes instead of paint, coatings or plating.

Many HP DeskJet printers are designed without paint, plating and flame retardants, and use a snap-fit design and limited number of screws, for easy disassembly and recycling.

The average number of parts in monochrome HP LaserJet print cartridges has been reduced by more than half and the average number of plastic resins by more than two-thirds.

In 2005, more than 7.8 million pounds (3,500 tonnes) of plastics were recovered and recycled into material that has been used to make new HP products as well as plastic trays, clothes hangers, shoe soles and wire spools. A new application using recycled cartridge plastics to make roof tiles was introduced in the European market in 2005.

HP's DfR standards integrate clear design guidelines and checklists into every product's design process to assess and improve a product's recyclability. This allows HP to develop products that are easier to recycle.

### **Next Steps**

Continue to provide customers with the best value and experiences through quality, environmentally-responsible products, Research and develop new and innovative ways to "close the loop".

Having recycled approximately half of billion kilograms (1 billion pounds) of electronics since 1987, HP has set a new goal for another half billion kilograms by the end of 2010.

Work with policy makers to transpose and implement Individual Producer Responsibility

## **GOVERNMENT POLICY:** What is and should be the role of the Government in addressing the issue of waste?

Government has two roles in addressing the issue of waste. The first is the standard regulatory one, already highlighted in relation to the WEEE Directive. Here it is the Government's responsibility to transpose or set regulations which encourage the reduction of waste.

However, the Government also has the opportunity to use the power of the £1.25bn public sector procurement budget to drive the market for more sustainable products. By reflecting its environmental priorities in its purchasing, the Government could provide a powerful economic incentive for producers to develop products and practices with a lower environmental impact.

Through our experience in this area, including our membership of the Government's Sustainable Procurement Taskforce, HP has developed four principles which we believe should guide the Government's approach to sustainable procurement:

### **Best practice**

HP has worked with Governments and international bodies to develop workable environmental standards which can be used as the basis of sustainable procurement policies. It is important that the UK Government does not seek to 'reinvent the wheel' when developing its preferred approach but instead seeks to adopt best practice from existing schemes operating elsewhere.

There are numerous environmental labelling schemes in the global marketplace for IT products and for consumer products in general, such as Energy Star or Blue Angel. However, many of these schemes have different environmental criteria and measurement methodologies. This means that, in order to obtain accreditation from the different labels, the products of global companies, such as HP, have to go through rigorous testing procedures several times in order to meet the criteria for the differing national and regional standards. HP therefore supports the general harmonisation of the various labelling schemes for IT products, particularly in relation to the criteria and the testing methodologies.

### **'Best Value' Vs 'Total Cost of Ownership'**

While HP believes it is vital that environmental and sustainability factors become an important element of the public procurement process, we recognise that value for money principles will continue to be a priority for procurement officials.

It is therefore important that sustainable procurement guidelines are based on 'total cost of ownership' measures in terms of costs, energy usage, reliability and recyclability at end of life rather than simple 'headline' costs. Procurement decision-makers must be encouraged to prioritise long-term environmental and efficiency criteria ahead of short-term cost saving.

### **Implementation**

In order for any procurement guidelines to be effective they must be rigorously enforced. At present, even mandatory environmental procurement criteria, such as the Market Transformation Programme's 'Quick Wins' are not consistently applied by public sector procurement decision makers who are driven by stringent efficiency targets to overlook environmental criteria and prioritise lowest upfront costs.

## Dialogue with manufacturers

HP believes that dialogue with IT manufacturers is essential to ensure that the Government has a clear understanding of market dynamics in particular sectors and that the sustainable procurement programme has realistic goals and expectations.

HP believes that a formalised structure should be developed which ensures accurate and timely industry input into the Government's sustainable procurement programme and has offered support to Government Ministers and officials in driving forward this recommendation.

## **GOVERNMENT POLICY:** What lessons can be learnt from other countries – within the EU and globally

### Sustainable Procurement

HP has, for some time, been in discussions with both the Department for Environment, Food and Rural Affairs and the Environment Agency about potential criteria for sustainable procurement policies. Both of these organisations have shown particular interest in the IT ECO declaration programme which was set up by IT manufacturers in response to increasing interest from public bodies in the Nordic region about the environmental attributes of products. HP was instrumental in the development of the resulting programme which allows participating manufacturers to communicate environmental information in a set format whilst self-verifying the data

HP has also participated in the development and implementation of sustainable procurement guidelines by many of its major customers (including Governments) across the globe. In the United States HP has recently worked with a range of environmental stakeholders including NGOs and the Environmental Protection Agency on the development of the Electronic Products Environmental Assessment Tool (EPEAT). The resulting programme helps inform procurement officials about the environmental attributes of personal computing devices based on a 'total cost of ownership' assessment. In the United States, the success of the EPA Electronic Products Environmental Assessment Tool (EPEAT) is a best practice example of how procurement officials can purchase IT products with their environmental attributes in mind.

Industry-led self-declaration systems, such as the IT ECO declaration, tend to be more workable than externally imposed standards, which risk being arbitrary and unfairly benefit one supplier over another. HP would therefore encourage the Government to build upon existing systems of self-declaration and continue to consult with industry to ensure that sustainable procurement criteria are realistic, effective and workable.

### Individual Producer Responsibility

IPR systems have and continue to exist across the world in Japan, the Netherlands (Until 2002), Maine, and Washington State. These systems provide incentives for producers to improve the design of their products.

HP is currently working with other producers, academics and technical specialists to identify explore and develop practical solutions to IPR. In Japan the IPR system<sup>1</sup> has led to the following benefits:

- Use of Design for Environment assessment tools including end-of-life phase
- Marking of materials and locations for ease of dismantling
- Unification of materials (plastics, magnetic alloys)

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<sup>1</sup> Source: Naoko Tojo (2006) EPR program for EEE in Japan: Brand Separation? Presentation to INSEAD WEEE Directive Series, 30 November 2006

- Reduction of the number of components and screws
- Standardisation of screws
- Use of recycled plastics in new components
- Development of recycling technologies
- Separation of various types of plastics
- Tools for ease of manual dismantling
- Communication between recyclers and designers

Without IPR, the WEEE directive is failing one of its main objectives to establish an incentive for producers to design products for easier recycling. The first step is to ensure that Article 8.2 is properly transposed by Member States.

## **Conclusion**

HP fully supports the Committee's decision to explore the issue of waste reduction. We strongly believe that minimising waste is a vital part of sustainable development which is why this has been a priority for HP for over 15 years.

While this is a complex issue, we believe that the most effective mechanisms for change are those that provide powerful economic incentives for businesses to adapt their products and processes. By integrating the principle of individual producer responsibility into the regulatory framework and using the power of public sector procurement, the Government is uniquely placed to achieve this and drive the market for more sustainable products.

In a number of global markets there are examples of both IPR and sustainable public procurement in operation. We would strongly encourage Government to examine these examples of best practice and build on them rather than attempting to 'reinvent the wheel' which would risk increasing the regulatory burden on businesses operating internationally.

In producing and taking forward its recommendations we would urge the Committee to continue its dialogue with the business community and consider ways in which the public and private sector can work collaboratively to address issues of waste reduction and environmental sustainability.

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