

# Greening the Supply Chain

## Introduction

There are two main approaches to integrating environmental and social considerations into procurement decisions. The first is to take a 'Product Approach' which uses information about specific goods and services to judge them according to environmental/social criteria. The second is a 'Supplier Approach' which looks at the credentials of the whole organisation supplying the goods/service.

A Product Approach typically uses the tools of life-cycle analysis and total cost analysis to attach an environmental rating to a proposed purchase. Supplier Approaches seek ways to rate companies and suppliers according to their overall environmental performance, typically using questionnaires and outside audits and rating systems, such as Environmental Management Systems.

Both approaches are valid and can be applied to different goods and services. Where a large proportion of the lifecycle costs are borne by the purchaser, it is often worthwhile taking a more detailed product approach, whereas for smaller, or generic items, the performance of the supplier overall might be of more interest.

## Supplier Approaches

**Environmental Management Systems (EMS)** - this is a systematic approach for organisations to bring environmental considerations into decision making and day-to-day operations. It also establishes a framework for tracking, evaluating and communicating environmental performance. An EMS helps ensure that major environmental risks and liabilities are identified, minimised and managed.

An EMS needs to be accredited to a standard; the most common standard is ISO 14001 (ISO 14001:2004 provides the requirements for an EMS and ISO 14004:2004 gives general EMS guidelines), although there are other standards in use. Accreditation need to be by an independent third party.

If a business has an accredited EMS this shows that they are able to:

- Identify and control the environmental impact of their activities, products or services; and
- Demonstrate continual improvement in environmental performance.

Implementing an EMS is voluntary and not all your supplier will be accredited. It might be worth discussing with suppliers to find out what environmental management they do have in place and whether certification is an option.

**Supply chain partnerships** - creating a partnership with your suppliers to identify improved efficiencies can benefit you both and is a proactive means of working towards greening the supply chain.

Whilst working together to tackle inefficiencies, you should consider the efficiency of suppliers' production processes and distribution by identifying where the following can be reduced:

- Water use and effluent waste;
- Energy consumption; and
- Solid waste to landfill.

For example, identifying where goods are over-packaged and working with your supplier to reduce the packaging can result in savings for your business in reduced waste disposal costs, as well as savings for your supplier in reduced packaging material costs and reduced transport weight.

**Case Study of the benefits of Supply Chain Partnership** (from Envirowise Fact Sheet EN799)

The Laundry Group Paragon provides laundry services (sheets, towels, soft furnishings etc) to Center Parcs. Paragon was identified as a key supplier and invited to join a supply chain partnership initiative run by Envirowise. Although Paragon already had a waste minimisation programme in place, the partnership initiative has resulted in further savings. One of these was the installation of a water recovery system in the washing department which has saved about 12% of water costs, a saving of approximately £36,000 per year.

It is important that you work closely with your suppliers to achieve these rewards, i.e. in some cases it may even lead to you being able to alter products to suit your business needs and improve environmental performance.

In order to begin to work with your supply chain you need to do the following:




- look where you spend your money and identify key suppliers of goods and services where you have a high spend or there potential for negative environmental impacts;
- work with these suppliers to identify ways to produce the same products or services with less natural resources, less wastage, and less pollution which can often save both parties money and improve profitability
- make use of free support, for example Envirowise offers UK businesses free, independent, confidential advice and support on practical ways to increase profits, minimise waste and reduce environmental impact.

### **Product approaches**

**Ecolabels** – an ecolabel is a labelling system for consumer and food products that demonstrates that the product has been made to certain standards, set by an independent certification body. Different labels concentrate on different environmental characteristics. In order for a ecolabel to be a valuable tool for distinguishing between products, the label should be:

- Meaningful– the label should indicate that the product offers significantly better environmental or social benefits than uncertified products.
- Consistent – the standards should be written in a way that can be verified in a consistent manner so that the label is consistent in meaning among different products
- Verifiable – the standards should be verifiable by the organisation certifying the label
- Transparent with the certification standards, evaluation procedure and organisational structure all available for public scrutiny
- Independent and protected from conflict of interest: Organisations establishing standards and deciding who can use a logo should not have any ties to, and should not receive any funding from the sale of certified products or contributions from logo users beyond fees for certification

There are many ecolabels in operation for many different types of environmental or social impacts, however there are websites dedicated to providing a database of ecolabels if you need further information (for example [www.ecolabelling.org](http://www.ecolabelling.org)). The table below provides some examples of common ecolabels.

Logo	Meaning	Administrator
	The European Union Ecolabel can be used by goods and services which have a lighter environmental footprint than similar products performing the same function. There are no regulations to oblige manufacturers to apply for the label. Instead the scheme places emphasis on consumer demand to transform markets, and actively encourages manufacturers to design products with reduced environmental impacts	Defra in partnership with AEA Energy and Environment
	The Carbon Reduction Label communicates the lifecycle greenhouse gas emissions from goods and services. For products to carry the Carbon Trust carbon reduction label, companies will need to have completed a rigorous analysis of their product or service supply chain following the PAS 2050 standard that is due to be finalised late 2008. Companies displaying the label sign up to a 'reduce it or lose it' clause whereby if they fail to reduce the carbon footprint of the product over a two year period they will have the label withdrawn by the Carbon Trust	The Carbon Trust
	The Fairtrade Mark is a registered certification label for products sourced from producers in developing countries. For a product to display the Fairtrade Mark it must meet standards which are set by the international certification body Fairtrade Labelling Organisations International (FLO). These standards are agreed through a process of research and consultation with key participants in the Fairtrade scheme, including producers themselves, traders, NGOs, academic institutions and labelling organisations such as the Fairtrade Foundation.	The Fairtrade Foundation

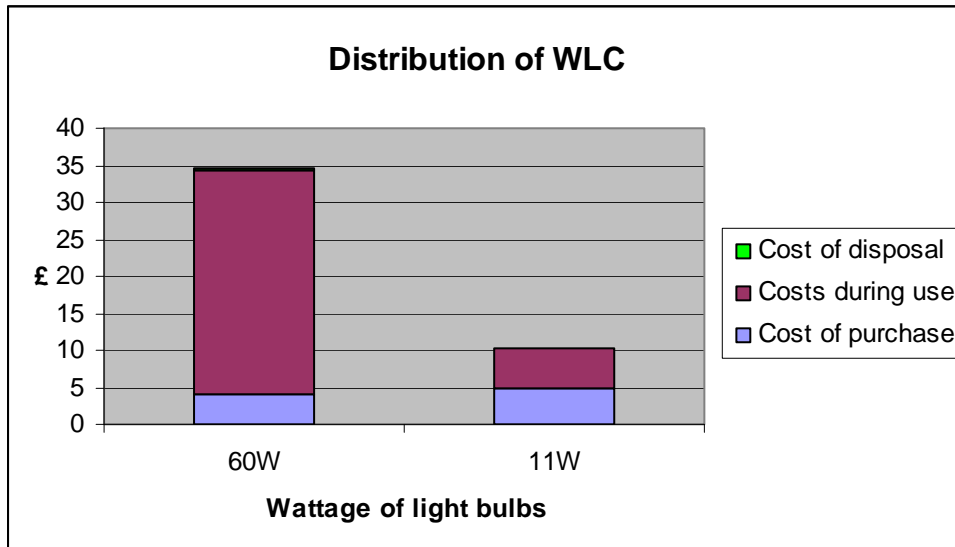
**Whole life costing (WLC)** - when purchasing high value goods or services where a significant proportion of the environmental impact occurs during the use phase, it may well be worth requesting information about whole life costing from suppliers.

WLC looks at the costs associated with purchase, use and disposal of products and services. Converting costs into a financial basis is convenient for making comparisons between products but it is also valid for looking at some environmental impacts because often financial expenditure and negative environmental impacts are linked. However, some environmental and social issues will still need to be considered independently e.g. social equity, fair trade, sustainable use of raw materials.

Example of WLC of light bulbs

Whole Life Costing criteria	60W incandescent light bulb	11W fluorescent light bulb
Life expectancy of light bulb	1000 hours	8000 hours
Purchase price of one bulb	£0.50	£5.00
Cost of purchasing light bulbs for 8000 hours use	£4.00	£5.00
Electricity use in 8000 hours (kWh)	480	88
Cost of electricity over 8000 hours use (£0.05 per kWh)	£24.00	£4.40
Cost of maintenance (cost of staff time to change the bulb £0.8)	£6.4	£0.8

Cost of disposal (assume each bulb weighs 100g). Hazardous waste £1000/tonne disposal, municipal waste £250/tonne.	£0.2	£0.1
<b>Total cost</b>	<b>£34.6</b>	<b>£10.3</b>



This example shows that the cheaper product is much more expensive when the Whole Life Costs are taken into account.

The purchase price of the 60W light bulbs is only about 10% of the total cost – the largest cost is the electricity consumption and this also has a large negative environmental impact. In comparison, the 11W fluorescent bulb costs more per light bulb but they last much longer and consume much less electricity (the amount of light produced is the same as the 60W bulb but fluorescent bulbs are much more efficient).

Because the fluorescent bulbs last longer, fewer need to be purchased, changed and disposed of (they do need to be disposed of as hazardous waste because of their mercury content but they can be recycled and the mercury recovered).

Whole Life Costing is not always a simple exercise but where products require energy to run them (vehicles, photocopiers, printers, buildings etc), requesting information about costs during all the product phases (purchase, use and disposal) can lead to better investment of resources. Requesting this information can also stimulate suppliers to look at ways to make equipment more efficient.

**Product specifications** – these are minimum environmental standards covering a range of commonly-purchased goods, including IT equipment, white goods, paper and construction materials. The standards can relate to characteristics such as energy consumption, recycled content, and biodegradability. These are quick easy ways for companies to ensure that they are greening their supply chain, without having to investigate the environmental performance of all their frequently purchased products. The Office of Government Commerce have published 'Quick Win' mandatory standards, which have been extended to 54 product areas, as part of their Sustainable Procurement Action Plan. Examples of the specifications are given in the table below.

Product type	2007 Minimum Procurement Specifications
LCD computer monitors	<ul style="list-style-type: none"> <li>• Energy consumption on mode &lt; 37.1W</li> <li>• Consumes 4W or less in sleep mode and 2W or less in off mode (equivalent to <u>Energy Star Monitors</u> requirement issued 1 January 2005)</li> </ul>

Copying paper	<ul style="list-style-type: none"> <li>• 100% recycled content</li> </ul>
Washing machines	<ul style="list-style-type: none"> <li>• EU Energy Label class A</li> <li>• Wash and spin performance class B or better</li> <li>• Water consumption &lt;10L/kg of laundry</li> <li>• Noise; washing &lt;62dBA, spinning &lt;76dBA</li> </ul>

Businesses can write quick win specifications for frequently purchased products, which can be sent to suppliers with tender documents. However, these do need to be regularly updated to ensure they remain representative of good practice and offer genuine environmental improvement. If all suppliers are meeting the specifications, you can communicate how you will evaluate tenders based on improvements over the minimum requirements.

### **Conclusions**

There are a number of ways to green the supply chain, through requesting minimum standards of companies and products, through to requesting in-depth information about products and working in partnership to identify mutually beneficial areas for improvement. However, the key to greening the supply chain is to communicate your objectives and requirements clearly and to ensuring that value for money, good environmental and social performance and quality get rewarded with continuing business.

