

European Commission Green Public Procurement
(GPP) Training Toolkit
- Module 1: Managing GPP Implementation



Life-cycle costing (LCC)

Fact sheet

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Owner, Editor: European Commission, DG Environment-G2, B-1049, Bruxelles

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1 Looking beyond the price: Life-cycle costs of products

The most common misconception about GPP is that green products cost more. However, upon closer inspection, this does not necessarily hold true.

Although in many (but certainly not all) cases the greener alternative may have a higher purchase price, if we analyse all the costs (*throughout the working life* of the product), overall the greener alternative may well prove to be cheaper over time.

If contracting authorities wish to ascertain, which products are most cost effective for them they need to apply **Life-Cycle Costing (LCC)** approaches in their procurement decisions.

This means comparing not just the initial purchase price of a product, but all future costs as well:

- Usage costs (energy/water consumption, consumables such as ink or paper)
- Maintenance costs
- Disposal costs/resale value

In the example on the right, the higher initial price of the greener product is more than compensated by the much lower usage and disposal costs.

For a great many products usage costs make up a very large portion of the costs which a contracting authority would pay. Typically this applies to energy consuming products such as vehicles, IT equipment or lighting, and of course buildings – for buildings, running costs may account for up to 85% of the life-cycle costs.

This means that, although a more energy-efficient building may cost more to construct, due to the lower operating costs (e.g. heating bills) it would have a shorter payback period and a higher return on investment.

In the case of energy efficient products, a “high” purchasing price is often more than compensated by even higher long-term savings. For example, the price of compact fluorescent lamps (CFLs) is about €10 each. These lamps are more expensive than conventional incandescent bulbs, but they last 10 times longer and use only a quarter of the

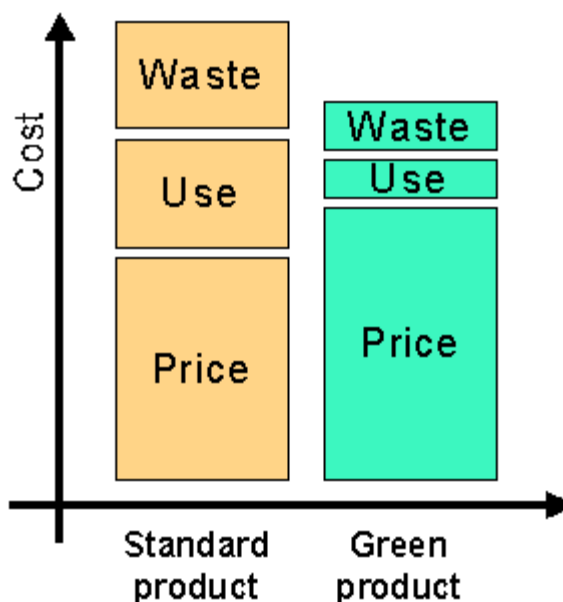


Figure 1: Influence of use and disposal costs on overall cost

**Factsheet – Life-cycle costing (LCC)**

electricity incandescent bulbs use. Therefore they offer savings of more than €40 in utility bills during their useful life¹.

To get an accurate picture of costs for the contracting authority, it is also necessary to take account of the life-span of the product – the longer a product lasts the less frequently it needs to be replaced, which may well lead to savings.

Many contracting authorities worldwide recognise the economic advantages of considering the life-cycle costs of products. Two good examples are given in Box 1 below.

Hamburg, Germany

When the environmental authorities in Hamburg, Germany, substituted two old inefficient lamps with one energy-efficient lamp in 300 public buildings, they reduced the annual electricity consumption by approx. 4.5 million kWh (an equivalent of approx. 2,700 t of CO₂ emissions). Assuming a price of 5 cents per kWh, this equates to a saving of €225,000 on Hamburg's electricity bill².

Kolding, Denmark

In the City of Kolding, a new school building has been designed to help the community save more than 50% in electricity and maintenance costs simply by installing a passive ventilation system

Box 1: Examples of savings achieved through LCC approaches

2 LCC in public procurement – available tools

There are many tools available, which aim to assist contracting authorities with implementing LCC approaches.

The following tools, for example, can be useful:

- The LCCA Tool – developed by ICLEI and ESD (Energy for Sustainable Development) within the DEEP project, available at www.procuraplus.org/index.php?id=4614 [under 'The Tools' section]
- Tender Evaluation Tool – produced by GRIP (the Norwegian Foundation for Sustainable Consumption and Production), available at http://www.grip.no/Innkjop/English/available_material.htm

¹ Worldwatch Institute (2002). *Vital Signs 2002 Highlights*.

² City of Hamburg Status Report, the RELIEF project: www.iclei-europe.org/index.php?id=1854