

EPA Information

Eco-efficiency and the private sector —contributions and benefits

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Introduction

Eco-efficiency is the path South Australian business and industry can take towards the goal of ecologically sustainable development—one of the greatest challenges facing Australia's governments, business, industry and the community.

Ecologically sustainable development—or ESD—aims to meet the needs of Australians today while conserving our natural resources for the benefit of future generations.

Eco-efficiency goes beyond simply preventing pollution and limiting the use of resources in manufacturing and production: it provides for the competitive needs of business by enabling increases in the value of goods and services.

This information sheet shows how Australian businesses, already familiar with such concepts as waste minimisation, cleaner production and pollution prevention, can continue to contribute to environmental improvement while also building up their own economic viability.

Business support for ESD

It is recognised internationally that the private sector must play a leading role in working towards ESD, because their day-to-day decisions have significant impacts on the environment.

For business and industry, eco-efficiency means 'doing more with less'—increasing their efficiency in using resources and in reducing waste and pollution, leading to lower business costs as well as fewer adverse effects on the environment.

The concept of eco-efficiency is supported by the World Business Council for Sustainable Development (WBCSD), a group active globally and supported by the Business Council of Australia and the Organisation for Economic Cooperation and Development (OECD).

Eco-efficiency is strongly supported by the business community in Australia because it does not focus exclusively on environmental outcomes. Instead, it challenges the belief that economic objectives and environmental concerns are in conflict, and recognises the simultaneous and complementary benefits of combining environmental and economic objectives.



Eco-efficiency means producing goods and services using less energy and fewer raw materials, resulting in less waste, less pollution and less cost. An eco-efficient business is also one that has either eliminated an operational waste by-product, or found a way to turn that by-product into an income earner.

The WBCSD has outlined the following actions to implement eco-efficiency:

- reducing the material intensity of goods and services—using less to make a product or deliver a service
- reducing the energy intensity of goods and services—using less energy
- reducing toxic emissions
- enhancing the recycling possibilities and options of material used
- maximising the use of renewable and recycled resources
- extending product durability—making things last longer
- increasing the service intensity of goods and services—more use out a product or service

Below are ten valuable eco-efficiency management tools that can help business and industry to maximise efficiency, product quality and profit through improved environmental management.

1. Cleaner production

Cleaner production eliminates or reduces pollution at the earliest point in the industrial process and uses non-technical as well as technical solutions. Cleaner production can be achieved by:

- using different materials
- modifying processes
- optimising the use of energy and raw materials
- on-site recovery and recycling.

The Environment Protection Authority (EPA) has developed over 20 Cleaner Production Case Studies that provide examples from a diverse range of industries on how cleaner production techniques have already resulted in significant environmental and economic benefits for businesses in South Australia.

You can read these on the EPA web site: www.epa.sa.gov.au/pub.html

2. Environmental management systems

Environmental management systems (EMS) provide businesses with structured ways of managing areas of their operations that have risks for the environment.

To implement an EMS, a business must provide detailed information to the EPA on its operational procedures, fulfil requirements on auditing, communication, training, review and emergency planning, and provide a clear designation of responsibilities for actions.

EMS give business and industry a means of setting objectives and targets to make continuous improvements into the future. They can apply for certification to standards such as ISO 14001 for their EMS.

3. Environmental auditing

There are several different types of environmental audit that can be conducted; however, in most situations the overriding aim is to identify:

- if the business complies with the relevant legislation

- if there are any significant environmental risks associated with the operations that may represent a liability to the business
- what needs to be done to remedy these situations.

Environmental audits can be conducted by internal or external auditors (or a combination) as single events or regular programs.

4. Public environmental reporting

Public environmental reporting is the public disclosure by a business of information about its environmental performance. This includes its impacts on the environment, its performance in managing those impacts and its contribution to ESD. Some benefits to be considered are:

- marketing opportunities
- increased confidence of investors, insurers and financial institutions
- improved relationships with regulators and non-government organisations
- greater control of environmental disclosure
- heightened staff commitment.

5. Design for environment

Design for environment is an approach to reduce the environmental impacts of products by introducing improvements at the design stage. Typically, design improvements minimise the quantity and toxicity of materials used in a product, or provide for easy dismantling, reuse and/or recycling at the end of a product's useful life.

The environmental performance of products is increasingly important as customer preferences for 'green' goods continue to grow. A product that has less impact on the environment is often better in terms of quality and marketability.

6. Product stewardship

Product stewardship is the principle of shared responsibility throughout the life of a product for its environmental impact. It covers raw material supply, manufacture, distribution, retail, through to ultimate disposal. This principle is being increasingly adopted around the world in the form of regulations, covenants, ordinances and other mechanisms on particular product categories.

An example in Australia is the National Packaging Covenant and the supporting *National Environment Protection Measure (NEPM) on Used Packaging Materials*. These initiatives are designed to ensure that all parties in the packaging supply chain help to reduce the environmental impact of packaging from used domestic products.

7. Life cycle assessment

Life cycle assessment (LCA) is a tool for evaluating the total environmental impacts associated with a product throughout its life cycle, from the extraction and processing of raw materials through to transport, use and disposal.

LCA can help businesses to understand the environmental aspects of their products better, and to identify the most effective improvements that can be achieved in the use of resources.

8. Supply chain management

Supply chain management, or 'greening the supply chain' as it is sometimes known, involves improving the processes and relationships that support the movement of goods and services along a supply chain.

The benefits to business can include better communication, more efficient delivery and distribution, quicker market response, and reduced costs. Some businesses are also using their influence as major customers in the supply chain to improve the environmental performance of their suppliers by requiring that they become certified to a recognised EMS.

9. Environmental accounting

Traditional accounting practices overlook the environmental costs of operating a business. Environmental accounting incorporates in a company's financial reports such costs as waste treatment and disposal, a poor environmental reputation, and environmental risk insurance premiums.

10. Ecological footprint

The 'ecological footprint' concept has been designed to estimate the impact of human activities on ecological systems. The ecological footprint of a business is the total amount of ecologically productive land and water occupied exclusively to produce all the resources consumed and to assimilate all the wastes generated by that business, using prevailing technology.

Suggested reading

Some suggested further reading related to business and the environment:

- Paul Hawken 1993, *The Ecology of Commerce*, Weidenfield & Nicholson, UK.
- Weizsacker, E, Lovins, A, Lovins, L 1996, *Factor Four*, Earthscan Publications, UK.
- Schmidheing, S, Zorraquin, FJL 1998, *Financing Change: The Financial Community, Eco-Efficiency and Sustainable Development*, MIT Press, USA.

FURTHER INFORMATION

Legislation

Legislation may be viewed on the Internet at: www.parliament.sa.gov.au/dbsearch/legsearch.htm

Copies of legislation are available for purchase from:

Government Information Centre
Lands Title Office, 101 Grenfell Street
Adelaide SA 5000

Telephone: 13 23 24
Internet: shop.service.sa.gov.au

For general information please contact:

Environment Protection Authority
GPO Box 2607
Adelaide SA 5001
E-mail: epainfo@epa.sa.gov.au

Telephone: (08) 8204 2004
Facsimile: (08) 8204 9393
Freecall (country): 1800 623 445
Internet: www.epa.sa.gov.au