

# Sustainable Government Procurement Project Category Reviews

Standards, guidelines, and targets for core  
Public Service departments

First revision  
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# Introduction

**This report has been developed to assist government departments to improve their sustainable procurement practices. It provides an overview of the Sustainable Government Procurement Project as well as guidance on what core Public Service departments must consider when purchasing goods and services in the following categories: paper, timber and wood products, travel and light fittings.**

**The document draws together all existing sustainable procurement policies and makes it mandatory for core government departments to implement them.**

**Departments will find it a useful reference tool for integrating sustainable procurement into existing procurement policy.**

## **Sustainable procurement**

By harnessing the collective purchasing power of government departments, government procurement can contribute to wider economic transformation goals and help to establish New Zealand's credentials internationally as a world-leading sustainable economy and producer.

Government can drive demand, encourage supply of innovative, environmentally-friendly products and services, encourage use of cleaner production methods, and ensure improved consideration of cost-effectiveness over the whole of life cycle of goods and services. Procurement's role in acting as a 'gatekeeper' in the process will also serve to raise the profile of the profession, and encourage practitioners to recognise the important role that procurement plays.

## **The Sustainable Government Procurement Project**

The Sustainable Government Procurement Project was launched in February 2006 by Prime Minister Helen Clark in conjunction with five other sustainability initiatives: Business Partnerships for Sustainability, Enhanced Eco-verification, Towards a Carbon Neutral Public Service, Towards Zero Waste, and the Household Sustainability Programme.

The purpose of the Sustainable Government Procurement Project is to make sustainability a core component of government procurement policy and practice. Through sustainable procurement practice, government departments will be encouraged to purchase goods and services that are more water and energy efficient, emit less carbon, produce less waste, and are accredited or environmentally certified where possible.

The working definition of 'sustainable procurement' that this project will use is:

*“...a process whereby organisations meet their needs for goods, works and utilities in a way that achieves value for money on a whole of life basis in terms of generating benefits not only to the organisation, but also to society and the economy, whilst minimising damage to the environment.”<sup>1</sup>*

The Sustainable Government Procurement Project comprises a package of initiatives focused on setting clear expectations, targets and minimum standards of practice through the broader Government Procurement Policy framework, and providing participants in the government market with access to tools, templates and training to ensure these can be met.

The Project is led by the Ministry for Economic Development’s Government Procurement Development Group (GPDG).

Sustainable procurement initiatives will be supported by the GPDG’s ongoing efforts to lift the quality of procurement practice across the public sector as a whole, which has been identified as variable at present.

## **Objectives of the Project**

The project is designed to:

- Support government leadership in sustainability through government procurement
- Raise awareness and increase knowledge of sustainability issues in the government market
- Develop a common understanding and consistent approach to sustainable procurement across the wider Public Sector
- Accelerate the adoption of more sustainable procurement practice by purchasing agencies
- Focus purchasing agencies’ sustainable procurement efforts on areas of greatest collective impact.

## **Benefits**

Expected benefits of the Sustainable Government Procurement Project include<sup>2</sup>:

- Government procurement market activity producing less carbon and waste<sup>3</sup>

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<sup>1</sup> “Procuring the Future” UK Sustainable Procurement Task Force, 2006

<sup>2</sup> Financial benefits have not been calculated at this stage.

<sup>3</sup> Including raising awareness and facilitating the achievement of the government’s wider sustainability goals (particularly those being pursued via the Ministry for the

- Improved value for money over whole of life outcomes from departmental spend, and operational cost savings through better demand and waste management, and the use of more energy, water and resource efficient goods and services
- Knowledge and methods for incorporating sustainability considerations into procurement decisions being widely disseminated both within and beyond the public sector through good practice government procurement arrangements (eg, syndicated procurement contracts; standard tender and contract clauses)
- Improved availability of sustainable and innovative goods and services in New Zealand due to increased demand in the government market
- Increased supply opportunities for innovative and sustainable New Zealand firms
- New Zealand firms gaining competitive advantage by adopting sustainable practices and credentials.

## **What the Project will achieve**

The Sustainable Government Procurement Project has a number of deliverables associated with it. These work streams are outlined below.

### ***Policy***

#### ***Single government procurement policy incorporating sustainability***

A new ‘single procurement policy’ will be developed that incorporates sustainability principles and criteria. Other existing policies (eg, Timber and Wood Products Procurement Policy) will also be integrated into this single policy in order to create a less complicated, more cohesive policy framework that is capable of effective implementation by state services agencies, and consistent with the promotion of efficient government procurement markets in New Zealand and internationally.

#### ***Developing a national framework for sustainable government procurement***

The Ministry of Economic Development has been working closely with the Australian Procurement and Construction Council (APCC), which had developed a draft framework for Australian jurisdictions (informed by international examples). The collaborative efforts of MED and APCC have reached the stage where it is now possible to issue a joint Australian and New Zealand Government Framework for Sustainable Procurement.

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Environment/Govt<sup>3</sup>-led Waste Minimisation and Management, and Towards a Carbon Neutral Public Service projects).

The purpose of the framework is to develop a common understanding of what sustainable procurement is, outline benefits, and provide a set of national principles to assist government departments and agencies across the state services to implement sustainable procurement. This document will be available on [www.procurement.govt.nz](http://www.procurement.govt.nz) from 14 September 2007.

### ***Setting standards, guidance and targets***

#### ***Category Review Teams***

Category Review Teams have been established to determine minimum sustainability standards and clear, measurable targets for compliance for government procurement in sectors and product categories where these will have greatest impact. A two-stage approach to implementation is planned:

- **Stage 1:** To develop for each category, a set of minimum standards and targets for government departments to work towards. These will be based on the most important sustainability attribute or impact for that category and, where appropriate, criteria or guidance that has been developed by other departments (eg, Govt<sup>3</sup>/Ministry for the Environment, Energy Efficiency and Conservation Authority, Ministry of Transport, and Ministry of Agriculture and Forestry).
- **Stage 2:** To produce guidance material for government departments to understand what is expected and how to comprehensively integrate sustainability considerations into procurement practice as a whole (including tenders, contracts, service level agreements, monitoring and reporting).

A number of categories have already been identified for priority action on the basis that:

- Specific standards and criteria have already been developed by other departments such as Govt<sup>3</sup> (a number of departments have already adopted these)
- They represent areas of significant spend for many departments. The objective is to maximise the number of government departments engaged in sustainable procurement activity and leverage combined purchasing power or influence
- There are obvious and significant improvements that can be made and these can be easily specified in tender documents and contracts (usually products rather than services)
- Any higher up-front purchase costs should balance out over the longer term through increasing supply in a competitive market (eg, recycled paper) and whole-of-life savings (eg, energy-efficient lightbulbs)

- They support other projects within the wider programme (eg, Govt<sup>3</sup>, “Towards a Carbon Neutral Public Service” and Waste Minimisation and Management<sup>4</sup>)
- There is frequent turnover, which in turn requires frequent procurement activity.

## **New standards, guidelines and targets**

As required by the Project, the Category Review Teams have developed new mandated standards, guidelines and targets for core government departments. These were announced in August 2007.

According to the standards, guidelines and targets, government departments must now consider the environmental credentials of goods and services they purchase.

This will help ensure government departments purchase goods and services that are more water and energy efficient, emit less carbon, produce less waste, and are accredited or environmentally certified where possible.

The standards will provide impetus for government departments to improve their sustainable business practice, and, in procuring more environmentally-friendly products, help to drive the market for production of goods with better environmental credentials.

To enable progress to be made in the short term, Category Review Teams have focused on the following categories where standards have already been developed:

- Paper (recycled content, duplexing etc)
- Timber and wood products (legally sourced and sustainably produced)
- Travel (motor vehicles, airtravel/video conferencing)
- Light fittings.

Over time a wider range of sustainability standards and criteria will be developed, targeting areas of greatest impact. These will take into consideration cost-benefit analyses; level of spend; potential to use syndicated procurement contracts to leverage spend and maximise departmental coverage; departments’ ability to influence the market; capability of the market to meet demand; experience to date; international evidence; and fit with the wider sustainability programme.

The standards, guidelines and targets apply to core Public Service departments as listed in the First Schedule to the State Sector Act 1988. Other agencies are also encouraged to follow suit.

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<sup>4</sup> MfE website, <http://www.mfe.govt.nz/issues/waste/>

In addition, as part of their written membership commitment, Govt<sup>3</sup> member agencies have undertaken to implement Ministerial directives on sustainable procurement such as the Timber and Wood Products Procurement Policy.

**The following sections outline the standards, guidelines and targets established by the Category Review Teams for paper, timber and wood products, travel and light fittings. Departments will find them a useful tool for integrating sustainable procurement into their existing procurement policy.**

# Category Review

## Timber, wood products and paper

**This Category review for Timber, Wood Products and Paper provides guidance for procurement practitioners, information on mandatory requirements, reference material, key contacts and useful links to more information.**

### Introduction

The timber, wood products and paper review will use the ‘purchasing power’ of government departments to guide the market towards the use of legally-sourced and sustainably-produced timber and wood products. Illegal logging is estimated to cost New Zealand producers US\$178 million per year through competition from cheap illegally-sourced wood products in overseas markets. In countries where illegal logging is a significant problem there are also widespread social and environmental impacts as a result of this activity.

In 2006, the Ministry of Agriculture and Forestry developed the New Zealand Timber and Wood Products Procurement Policy (TWPP) in order to address the practice of illegal logging and associated trade. It is designed to ensure that government is buying only legally-sourced timber and timber products. The TWPP will be reviewed in 2008 to assess the practicality of introducing a mandatory sustainability requirement.

This category review reinforces existing policies (including the TWPP), guidelines and advice developed by a number of agencies. Many government departments have already taken steps to implement these policies; the aim of this process is to provide a platform for delivery through main stream government procurement practices.

The intention of the review is to provide a procurement framework that demonstrates the government’s commitment to environmental sustainability through showing leadership in addressing illegal logging, supporting the development of international sustainable forestry management and reducing the overall environmental impact of its activities through reducing consumption of resources and energy, toxic emissions and the generation of waste.

The new requirements and guidelines are designed to ensure departments:

- Use timber and wood products from legal and sustainable sources
- Reduce both consumption and the generation of waste.

They apply to products listed on the Ministry of Agriculture and Forestry website (<http://www.maf.govt.nz/forestry/illegal-logging/nz-policy-on-illegal-logging/page-09.htm>), which fall into the following broad product groups:

- Rough, sawn and dressed timber
- Wooden structural components
- Plywood and veneers
- Fabricated wood (MDF, Chipboard)
- Wooden furniture, fittings and joinery
- Paper (including copier paper, base stock for printing and sanitary tissue).

### **Scope and aim of the review**

The overarching aims of the category reviews for timber, wood products and paper are to:

- Work with relevant government departments to build on the work already done and identify minimum standards (legality) and targets (expanding sustainability) for the category, based on sustainability attributes or impacts. These standards and targets become the minimum requirement for all future procurements of any timber, wood products and paper
- Develop reference material (including guidelines, tools and templates) to assist procurement practitioners in meeting these standards and targets, and to assist their departments in meeting their Govt<sup>3</sup> commitments and developing and achieving their carbon neutrality plan
- Encourage procurement practitioners to take a more holistic approach to procurements within this category, including working with their departments to develop the required measurement and reporting regimes
- Provide a continuous improvement programme to review, validate and improve existing standards, and develop related additional standards and targets together with associated reference material that will be introduced over time. Related categories under consideration are other office consumables, paper-based packaging and printing.

The New Zealand Government is a significant buyer of timber, wood products and paper through: general office consumption (eg, photocopier paper), base stock for printed material (eg, publications), building (eg, construction timber) and office fit-outs (eg, furniture and fittings).

# Timber

The government's demand for basic timber is primarily driven by construction and building requirements. Government departments are not only required to source legally-derived timber, they are also required to maintain auditable records of purchases in order to demonstrate that this has been verified. The following requirements extend to third parties such as project management and construction companies.

## **MANDATORY REQUIREMENTS**

### ***Timber***

Public Service departments are required to:

- ensure they use only legally-sourced timber, in accordance with the New Zealand Timber, Wood Products and Paper Procurement Policy
- take all reasonable steps to ensure timber originates from sustainably-managed sources, in accordance with the New Zealand Timber, Wood Products and Paper Procurement Policy.
- document for audit purposes their verification of the legality and sustainability of timber purchased and
- ensure that the final disposal of construction and demolition timber is undertaken in accordance with the waste minimisation principles set out in the REBRI<sup>5</sup> guidelines.

## **Guidance**

The following guidance notes have been developed to help government departments implement the mandatory requirements for Timber procurement:

1. The requirements apply equally to domestic and imported timber.
2. The requirements apply to all tender contracts and all term-supply contracts. Requests for tender or invitations to supply timber products through need to seek timber derived from legally-harvested sources.

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<sup>5</sup> *Resource Efficiency in the Building and Related Industries* – Its purpose is to promote, advocate, and assist resource efficiency measures in the building and related industries.

3. For existing term-supply contracts it is expected that all reasonable steps will be taken to introduce legally, sustainably-sourced products. In the event that a contract is renewed, the mandatory requirements shall apply.
4. Government departments are required to maintain records for audit purposes of timber and wood procurement (including paper) that demonstrate verification of the legality of the harvesting of the forests where the timber and wood products were derived from.
5. Government departments entering into building or construction contracts, for which timber will be procured by a prime contractor or sub-contractor, are required to ensure that third parties acting on their behalf also comply with the requirements. Departments will, therefore, need to seek the co-operation of any prime contractors or sub-contractors in meeting the requirements.
6. It is also a requirement for government-funded building project proposals for building up to four floors that a build-in wood option is submitted at the concept stage (including sketches and price estimates). For more detail see Cabinet Minute (07) 22/9.
7. Remember, it is important that when departments make an approach to market, they inform potential suppliers of the mandatory requirements. This will ensure that any tender submission takes into account the department's obligation to meet the requirements and informs potential respondents of any preference the department may be giving to bids that include timber from sustainable sources.

### **Example tender clauses**

These clauses are examples of wording that may be used. Departments are free to vary them or use their own standard documents. It is important, however, that any clauses used in tender documentation reflect the overall intent of the government in improving sustainability. Sufficient information must also be provided for respondents to be able to provide the correct data for evaluation of the response and compliance with mandatory requirements.

It is also important to make the distinction between product and organisational certification. An organisation may be ISO 14000 certified in terms of its own environmental management systems yet still may not be able to supply products that meet the requirements.

### ***Clause relating to mandatory requirements***

“Respondents should note that it is a requirement that timber and wood products are legally harvested and originate from sustainable sources. There are numerous

certification schemes in existence and whilst there are other methods of verification these provide the best evidence that a source meets these requirements.”

***Clauses relating to legal sourcing***

“Respondents are required to demonstrate that the timber and wood products proposed to satisfy the [procurement] requirement will be sourced from legally-harvested forests; this can be done by providing:

- a. Proof of certification from a recognised forest certification scheme; or
- b. Proof of certification from a stepwise-certification scheme, including chain of custody information which shows that the product has come from a legally-harvested and managed forest; or
- c. Proof of legality from a legality verification scheme; or
- d. A declaration that the wood is from a legally-harvested forest. The declaration must include the origin and species of the wood and a declaration that the timber or wood product is from a legally-harvested forest.”

***Clauses relating to sustainable sourcing***

“Respondents are required to demonstrate that the timber and wood products proposed to satisfy the requirement will originate from recognised, sustainable sources. This can be done by providing:

- a. Proof of certification from a recognised forest certification scheme; or
- b. Proof of certification from a stepwise-certification scheme, including chain of custody information which shows that the product has come from a sustainably managed forest.”

**Example contract clauses**

***Clauses relating to legal sourcing***

“All timber and wood-derived products procured by the Contractor for supply or use in performance of this contract shall be derived from Legal Timber. The term ‘Legal Timber’ in the context of this Contract Condition refers to timber or wood products from a forest that that has been legally harvested and where the organisation or body that felled the trees and provided the timber from which the wood is supplied or derived had legal rights to use the forest.”

OR

“Timber and wood products utilised to satisfy this contract shall be sourced from legally-harvested forests.”

***Clause relating to sustainable sourcing***

“All timber and wood-derived products procured by the Contractor for supply or use in performance of this contract shall be (a) recycled timber or wood products and/or (b) timber and/or wood products from a 'sustainable source' or (c) a combination of (a) and (b). The Contractor will be able to produce verification of this within a period of two weeks if requested by [agency].”

**Reference material – How do I identify legally-sourced and sustainably-produced timber?**

***New Zealand-sourced timber***

Timber from New Zealand planted and indigenous forests may be considered sustainably produced where shown to have been legally harvested in terms of applicable legislation, including the Resource Management Act 1991 (eg, a resource consent) or, in the case of indigenous timber, the sustainable forest management provisions of the Forests Act 1949 (eg, a MAF approved management plan or permit). The New Zealand forestry industry has developed a voluntary National Standard for Environmental Certification of well-managed Plantation Forests in New Zealand, which is intended to be compatible with Forest Stewardship Council (FSC) criteria.

***Certification***

One of the main ways to identify sustainably-produced timber is by looking for third-party full certification. The government recognises a number of well-known certification schemes (see Certification Schemes below), and does not endorse any one scheme above others. Certification is also a reliable verification of the legality of timber products.

***Certification schemes***

***Full certification***




With forest certification, an independent organisation develops standards of good forest management, and independent auditors issue certificates to forest operations that comply with those standards. This certification verifies that forests are well-managed as defined by a particular standard and ensures that certain wood and paper products come from responsibly managed forests.

Various forest certification schemes operate around the world; there is no single accepted forest management standard. Each system takes a somewhat different approach in defining standards for sustainable forest management. Some schemes are international, others limited to one country or region. Currently The Central Point of Expertise for Timber Procurement (CPET) has identified five certification schemes, listed in the table below, that meet the requirements for certification of sustainable and legal timber sources.

**Examples of full certification schemes**

The examples listed below are recognised full certification schemes. Some schemes are more rigorous in their approach than others and that this is not an exhaustive list. Note that only those schemes that are both legal and sustainable fully meet the criteria under the New Zealand Timber, Wood Products and Paper Procurement Policy. For information and advice on other certification schemes, please contact either the Ministry of Agriculture and Forestry or the Ministry for the Environment.

<i>Logo</i>	<i>Certification Scheme</i>	<i>Legal</i>	<i>Sustainable</i>	<i>Details</i>
	Canadian Standards Association (CSA)	Yes	Yes	<a href="http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/canadian-standard-association">http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/canadian-standard-association</a>
	Forest Stewardship Council (FSC)	Yes	Only products or product lines containing >70% certified or recycled raw material	<a href="http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/forest-stewardship-council-fsc">http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/forest-stewardship-council-fsc</a>

	Malaysian Timber Certification Council (MTCC)	Only products containing 100% certified raw material.	No	<a href="http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/malaysian-timber-certification-council-mtcc">http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/malaysian-timber-certification-council-mtcc</a>
	Programme for the Endorsement of Forest Certification (PEFC)	Yes	Only products or product lines containing >70% certified or recycled raw material	<a href="http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/programme-for-the-endorsement-of-forest-certification-pefc">http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/programme-for-the-endorsement-of-forest-certification-pefc</a>
	Sustainable Forestry Initiative (SFI)	Yes	Only products or product lines containing >70% certified or recycled raw material	<a href="http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/sustainable-forestry-initiative-sfi">http://www.proforest.net/cpet/evidence-of-compliance/category-a-evidence/approved-schemes/sustainable-forestry-initiative-sfi</a>

***Step-wise approach to full certification***

Many smaller operators, and those in developing countries, do not have the capacity to achieve full certification of forests and/or timber and wood processing and production. In these cases some operators have taken a step-wise approach to certification.

### ***Example of an acceptable step-wise certification scheme***



The Tropical Forest Trust (TFT) was established in March 1999 by companies trading in tropical wood products. The TFT helps its members to implement responsible wood procurement policies. It also helps its members to manage and monitor their supply chains and the forests that anchor those supply chains to move towards FSC certification.

### ***Example of an acceptable procurement policy-based approach***



The Imported Tropical Timber Group (ITTG) is made up of about 80% of New Zealand timber importers. The group comprises members from New Zealand timber importers and retailers and from environmental NGOs, including Greenpeace International. The ITTG aims to ensure that members import timber in accordance with a charter of understanding including a requirement that members actively seek to import timber from sustainable sources. Not all New Zealand timber importers belong to ITTG. Products labelled with the ITTG ECO timber label are endorsed by the New Zealand Imported Tropical Timber Group. The Charter of Understanding can be found at:

<http://www.greenpeace.org.nz/pdfs/nzittg.pdf>

### ***Validation of legality***

All the full and stepwise certification schemes above include legality as a requirement of meeting the conditions of their certification programme.

Some operators may offer a certificate of legality on their products from an accredited certification organisation. It is important to make sure that any proof of legality includes proof of legal harvesting of the forest where the product came from.

### ***Example of a legality validation scheme:***



SGS offers a Timber Legality and Traceability Verification (TLTV), Voluntary Legal Timber Validation (VLTV) and Mandatory Legal Timber Validation (MLTV) to validate legality. These certificates incorporate regular auditing, or continuous monitoring and verification of a company's wood production and tracking information.

### ***Other evidence***

Certification is not the only way to identify sustainably-produced timber. Other equivalent evidence of origin of products from sustainable sources should also be

considered. For example, some suppliers may be able to show evidence that they are using the voluntary National Standard for Environmental Certification of well-managed plantation forests in New Zealand. This directs plantation forest owners to take into account environmental and social aspects of forest management and includes various standards on legality, consultation, indigenous rights, health and safety, biodiversity, chemical use and management. New Zealand producers should be able to demonstrate compliance with relevant provisions in regional resource management plans.

### ***ISO standards***

Some companies cite the “International Standards Organisation (ISO) 14000 Standard – Environmental Management System (EMS)”. This process standard applies to a broader range of activities such as an organisation’s products, services, operations, facilities and transportation. Unlike the other certification schemes listed above it does not result in a label.

An ISO 14000 series certification is evidence that the organisation has a management system in place designed to measure its impact on the environment, but does not provide information about actual environmental impacts or whether they are acceptable. Thus an ISO 14000 certification can not be used to confirm timber legality or sustainability.

Assuming legality is proven by another means, ISO 14000 certification may be used as a broader evaluation criterion when considering overall corporate social responsibility. It should not, however, be considered as a replacement or an equivalent to certified sustainable forest management schemes.

### ***Contacts***

For information and advice relating to the New Zealand Timber and Wood Products Procurement Policy (TWPP) and timber certification schemes contact:

Policy Analyst, Forest Policy Coordination  
MAF Policy  
Ministry of Agriculture and Forestry  
PO Box 2526  
Wellington  
NEW ZEALAND  
Phone: +64 4 894 0678  
Fax: +64 4 894 0745  
Email: [alison.watson@maf.govt.nz](mailto:alison.watson@maf.govt.nz)

### **Useful links**

- Ministry for the Environment Govt3 programme (<http://www.mfe.govt.nz/issues/sustainable-industry/govt3/>) Govt3 is a programme targeted at improving sustainable practice in the state sector . As at 1 August 2007, 49 agencies have formally signed up to Govt3 membership. The Govt3 programme also engages in less formal partnerships with sustainability leaders in the wider public and private sectors
- The UK government Department for Environment, Food and Rural Affairs funds a site called The Central Point of Expertise for Timber Procurement (CPET) (<http://www.proforest.net/cpet>) which contains a wealth of advice on timber procurement and related issues
- The Forest Certification Resource Center ([http://www.metafore.org/index.php?p=Forest\\_Certification\\_Resource\\_Center&s=147](http://www.metafore.org/index.php?p=Forest_Certification_Resource_Center&s=147)) has further information on certification that may be useful
- The World Wide Fund for Nature, ([http://www.panda.org/about\\_wwf/what\\_we\\_do/forests/index.cfm](http://www.panda.org/about_wwf/what_we_do/forests/index.cfm)) has a range of information and a number of useful documents relating to timber sourcing and sustainability.

# Wood products

The government purchases a broad range of wood products both directly, for example as office furniture, and indirectly, for example as construction materials (chipboard, plywood) where the original timber has undergone a secondary process which may result in the presence of environmentally harmful residues.

## ***Furniture***

Office furniture includes chairs and other types of seating, desks, tables, filing and storage cabinets and their associated components and accessories. These can be made from a variety of materials including metal, wood and wood-based products, plastic and fabric.

## ***MANDATORY REQUIREMENTS***

### ***Wood Products***

Public Service departments are required to:

- ensure that wood products purchased are made from timber that is legally-sourced and take all reasonable steps to ensure that this timber originates from sustainably-managed sources, in accordance with the New Zealand Timber, Wood Products and Paper Procurement Policy and
- ensure that the final disposal of construction and demolition timber is in line with the waste minimisation principles set out in the REBRI<sup>6</sup> guidelines.

## ***GUIDELINES***

### ***Wood Products***

- Minimise the use of wood products that use toxic chemicals in either processing or coating
- Avoid/minimise use of wood products containing these ingredients:
  - ~ Formaldehyde and other aldehydes
  - ~ 4-phenylcyclohexene and other volatile organic compounds
  - ~ CFCs or HCFCs.

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<sup>6</sup>Resource Efficiency in the Building and Related Industries – Its purpose is to promote, advocate, and assist resource efficiency measures in the building and related industries.

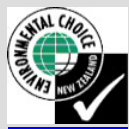
- Make cost effective use of products carrying a recognised eco-label
- Reuse furniture wherever possible
- Minimise construction and demolition timber waste through the use of the REBRI guidelines
- When entering into building or construction contracts that include the use of timber and wood products, ensure prime contractors and sub-contractors apply the REBRI guidelines to the building project (eg, develop a site waste management plan and separate materials for recycling)
- Note that for recycled wood, legality and sustainability relate to its immediate previous use

## Reference material

### ***Use of Eco-labels***

Eco-labelling organisations such as those mentioned below provide guidance on their websites about suitable standards to apply when evaluating wood products.

Eco-labelling is a mechanism enabling organisations to demonstrate the environmental credentials of their products. The use of products carrying labels from recognised eco-labelling schemes is a good way of ensuring that the products being supplied meet the desired standards.



‘Eco-labelling’ is a voluntary method of environmental performance certification and labelling that is practised around the world. An ‘eco-label’ is a label which identifies overall environmental preference of a product or service within a specific product/service category, based on life cycle considerations. In contrast to ‘green’ symbols or claim statements developed by manufacturers and service providers, an eco-label is awarded by an impartial third-party in relation to certain products or services that are independently determined to meet environmental leadership specifications.

Other eco-labels which have similar standards are Good Environmental Choice (Australia), Nordic Swan, EU Flower or Blue Angel (Europe) EcoMark, (Japan), Thailand Green label or China EcoLabel.

### **Product Checklist**

The following checklist can be used to evaluate products that have no product specifications with environmental criteria or carry a recognised eco-label.

Do the timber products have a recognised Timber and Timber Product CPET approved certification Scheme, eg, Forest Stewardship Council (FSC)?	
If timber products are not certified, can you provide other evidence that the wood is sourced from sustainably-managed forests or plantations that limit adverse habitat, biodiversity and toxicity impacts?	
If the timber is from a local source, can you provide evidence that the harvest is in compliance with New Zealand environmental legislation?	
Does the product contain low-VOC adhesives, paints and finishes?	
Was the manufacturing process free of carcinogenic and/or toxic chemicals wherever practicable? How?	
Were CFCs or HCFCs used as blowing agents in manufacturing any foam components?	
Can product components be reused in other products (re-manufactured) at the end of its life?	
Does the product contain recyclable materials such as steel and aluminium?	
Does the product contain materials with a recycled content such as recycled PVC or post-consumer PET plastic?	
Is the product easy to disassemble? Or does it contain co-injected plastics, ie, materials that contain two types of plastic or plastic and a fibre (which makes recycling difficult)?	

### ***Related resources and information***

- Guidelines on the recovery and recycling of timber waste can be found at [www.rebri.org.nz](http://www.rebri.org.nz)
- For examples of environmentally-preferable, product-specific contract language, check out the US Environmental Protection Agency website – [www.epa.gov](http://www.epa.gov)
- Building Research Association New Zealand (BRANZ): Guidelines and publications in all areas of building and construction – [www.branz.co.nz](http://www.branz.co.nz)
- **Green Seal Choose Green Report, Office Furniture** – [http://www.green seal.org/resources/reports/CGR\\_officefurniture.pdf](http://www.green seal.org/resources/reports/CGR_officefurniture.pdf)
- GREEN GUARD: Certification standards for low emitting products for the indoor environment. Air Quality Sciences Inc. USA. – <http://www.greenguard.org/Default.aspx?tabid=109>.
- Environmental Choice Canada: Criteria for office furniture and panel systems – <http://www.environmentalchoice.com/English/Home/>
- Der Blauer-engel – [http://www.blauer-engel.de/englisch/navigation/body\\_blauer\\_engel.htm](http://www.blauer-engel.de/englisch/navigation/body_blauer_engel.htm). Includes basic criteria for the award of the environmental label. Low-emission wood products and wood-base products RAL-UZ 38.

# Paper

Government departments are significant consumers of office paper. New Zealand as a whole uses about 64,000 tonnes of office paper every year. The environmental impacts of a paper product occur in the following phases of the product's life cycle:

- Managing and harvesting of the forest
- Producing pulp and paper
- Processing the paper product as waste
- Processing production waste
- Post-consumer waste.

The overall provisions of the Timber, Wood Products And Paper Policy apply to all paper purchases made by government departments either directly, or through third parties (eg, advertising agencies, printers), so departments must be able to demonstrate that the products originate from legally-harvested wood and that appropriate consideration has been given to broader sustainability criteria.

The global impacts of paper production and use are significant. These guidelines are aimed at:

- Improving water quality through the reduction of discharges of certain toxic or otherwise polluting substances
- Reducing environmental damage or risks related to the use of energy by reducing energy consumption and related emissions
- The reduction of environmental damage or risks related to the use of hazardous chemicals
- The application of sustainable management principles in order to safeguard forests
- Encouraging the recycling of paper.

## **MANDATORY REQUIREMENTS**

### ***Paper***

Public Service departments are required to:

- ensure that source timber for paper is legally-sourced and take all reasonable steps to ensure that source timber originates from sustainably-managed sources, in accordance with the New Zealand Timber, Wood Products and Paper Procurement Policy and
- only purchase paper that meets the requirements for achieving a minimum rating of three stars and
- maintain auditable records to demonstrate that the paper sourced meets the requirements above.

## **GUIDELINES**

### ***Paper***

- Make maximum use of printers capable of duplex (double-sided) printing
- Set the default for capable printers (networked and stand-alone) to duplex (double-sided) mono
- Align practice with core Govt<sup>3</sup> principles relating to the use of paper
- Minimise use of smaller stand-alone and desktop printers, as this significantly reduces the overall costs of printing and reduces paper usage
- Used electronic forms of communication wherever possible
- In cleaning and waste management contracts, include a requirement that waste be suitably segregated and recycled wherever possible.

## **Five Star Paper Rating Scheme**

In order to simplify the identification of suitably-qualified paper products, a 'star' rating system has been introduced. Paper purchased by departments must be capable of achieving at least a three star rating.

Information about this scheme can be found on the Ministry for the Environment website at <http://www.mfe.govt.nz/issues/sustainable-industry/paper/index.html>

Points to note are:

- This scheme replaces the current system but will continue to be administered by the Ministry for the Environment

- The scheme requires paper suppliers to register and maintain their own product data
- Where a supplier is claiming certification (eg, Environmental Choice, Forest Stewardship Council), the Ministry for the Environment will need to see all relevant documentation before granting them a star rating
- The scheme and related database does not represent government endorsement of any particular product or supplier.
- The database is not comprehensive and government departments are not required to use the products and suppliers listed in the database. Rather, the database is a tool to help departments identify potentially suitable paper products and suppliers to meet their requirements
- Departments using a paper product not listed on the database are still required to satisfy themselves that the product meets the requirements for achieving a minimum three star rating
- The scheme will use the existing data to provide the initial rating for paper products that have been registered already.

### How stars are awarded

One star is awarded for each topic area separately up to a maximum of five stars, which means different combinations are possible.

★ Mandatory	Documented evidence that all fibre used to make product was LEGALLY HARVESTED (See Note 1 below)
★	Bleaching by ECF, TCF or PCF – or unbleached (do not buy papers bleached with EC technology). See Note 2 below
★	Documented evidence that at least 70% of fibre used to make product was SUSTAINABLY GROWN AND HARVESTED. See Note 3 below
★	Paper life cycle impacts reduced at pulping and disposal stages by using at least 50% post-consumer RECYCLED fibre to make the product. See Note 4 below
★	Full paper life cycle impacts reduced and verified by an independent third party (Environmental Choice NZ or equivalent standards). See Note 5 below
No stars	Insufficient information provided

## Notes

1. Not supporting the illegal timber trade helps protect native forests and people in forest communities, reduces international conflict, and reduces unfair competition against legal operators. Proof of legal forest harvest includes country certificates and labels (see *Examples of Full Certification Schemes* in the Timber Category Review for details) and third-party audited industry self-claims. For this purposes of this scheme, recycled fibres are deemed to have been collected legally.
2. Chlorine-based bleaching has the potential to create persistent toxic organochlorine by-products in the environment as well as deplete oxygen in waterways. TCF (Totally Chlorine Free) and PCF (Process Chlorine Free) are oxygen based and use no chlorine. ECF (Elemental Chlorine Free) uses chlorine compounds rather than elemental chlorine, thus substantially reducing (but not eliminating) the risk. Some (but not all) types of ECF technology are near-equivalent to TCF in terms of organochlorine effluent. In addition, there are other potentially persistent eco-toxic chemicals used in the paper-making process. The greatest known risk chemicals are considered in the full life cycle eco-label standards.
3. Supporting sustainable forestry ensures that soil resources, biodiversity, forest-related communities and ecosystems are not depleted over the long term. Proof of sustainable forestry is best obtained through a CPET approved certification scheme such as FSC (Forestry Stewardship Council). Industry self-claims (eg, “well-managed forests” or “farmed trees”) should be backed up by third-party audit or other documented adherence to good practice standards as a minimum. For the purposes of this scheme, recycled fibres are deemed to have been collected sustainably.
4. Buying post-consumer recycled content paper products helps to reduce impacts in two key paper life-cycle areas: energy and chemical impacts of the tree-to-pulp phase, and methane-generation potential of land-filled paper (methane is 21 times more powerful than CO<sub>2</sub> as a greenhouse gas). These two areas make for a net contribution to climate change from the paper industry despite the carbon sink potential of growing trees. Buying recycled paper also supports the economic viability of recycling systems, which have local community benefits in employment and waste reduction. “Post-consumer” includes industrial paper consumers (eg, printers, packaging companies) but not in-house recycling at paper mills (mill broke).
5. Independently-audited, full life-cycle eco-labels provide a guarantee that the certified paper products have been produced in a way that created genuine reductions in environmental impact, in a number of key areas of the paper life cycle. A list of products that have achieved Environmental Choice certification is

available at [http://www.enviro-choice.org.nz/licensed\\_products.html](http://www.enviro-choice.org.nz/licensed_products.html). Other acceptable recognised third party eco-labelling schemes include:

- Good Environmental Choice – Australia
- Nordic Swan – Europe
- Blue Angel – Europe
- European Flower – Europe
- EcoMark – Japan.

For the purposes of this scheme, environmental management systems such as ISO 14001 and EMAS and eco-labels such as EnviroMark are not deemed to be equivalent as they relate to standards of management rather than demonstrating actual environmental credentials of particular products.

### ***How to use the five star system***

Core Public Service departments are responsible for satisfying themselves that the paper they source is capable of achieving a minimum rating of three stars. This means the paper they purchase should fall into one the following four groups.

Star Rating	☆☆☆	☆☆☆	☆☆☆☆	☆☆☆☆☆
Legally harvested (Mandatory)	✓	✓	✓	✓
Bleaching by ECF, TCF or PCF or unbleached	✓	✓	✓	✓
At least 70% of fibre sustainably grown and harvested	✗	✓	✓	✓
Lifecycle impact reduced by use of at least 50% recycled fibre	✓	✗	✓	✓
Environmental Choice or equivalent	✗	✗	✗	✓

### ***Contacts***

For further advice on recognised eco-labelling programmes for paper products or the application of the five star rating scheme, contact [govt3@mfe.govt.nz](mailto:govt3@mfe.govt.nz).

# Category Review

## Travel

This Category Review for Travel provides guidance for core government departments on standards and targets for travel planning, video conferencing, air travel and motor vehicles.

### Introduction

Transport is New Zealand's single largest energy consumer and is the fastest growing. Within New Zealand, transport accounts for over 43 per cent of all consumer energy use and it produces 46 per cent of the country's carbon dioxide emissions<sup>7</sup>.

Managing the environmental effects associated with the movement of goods and people in an organisation can have a wide range of positive effects, and has benefits not only for the organisation and staff, but also for the wider community.

This paper brings a number of themes together:

- Considering the demand for travel
- Reducing the need for workplace travel by examining alternatives eg, video-conferencing
- Where transport methods have to be used because there is no alternative, ensuring those chosen seek to reduce environmental impacts through informed decisions
- Where vehicles need to be procured, ensuring environmentally-efficient vehicles that are safe and fit for purpose are purchased.

### Scope and aim of the review

The review takes into account environmental, economic and social impacts. It focuses on developing a workplace travel plan, the use of video-conferencing, air travel, and types and use of motor vehicles for both passengers and freight (cars purchased/leased/hired, taxis, buses, coaches, commercial vehicles).

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<sup>7</sup> New Zealand: 4 Million Careful Owners,  
<http://www.4million.org.nz/climatechange/takingaction/home.php>

To support this review, a Travel Category Review Team has been established that will on an ongoing basis:

- Work with relevant government departments to build on the work already done and identify minimum standards and targets (improving sustainability) for the category based on sustainability attributes or impacts. These standards and targets set the minimum requirements for all future procurements<sup>8</sup> for the Travel Category
- Develop reference material (including guidance, tools and templates) to assist procurement practitioners in meeting these standards and targets, and to assist their departments in developing and achieving their carbon neutrality plan<sup>9</sup> and meeting Govt<sup>3</sup> commitments
- Encourage procurement practitioners to take a more holistic approach to procurement within this category, including working with their departments to develop the required measurement and reporting regimes
- Provide a continuous improvement programme, to review, validate and improve existing standards and develop related additional standards and targets together with associated reference material that will be introduced over time.

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<sup>8</sup> Criteria around sustainability should be included in evaluation criteria; however the weighting that sustainability takes should be considered on a 'case by case' basis.

<sup>9</sup> POL (07) 131: "Towards a Sustainable New Zealand: Carbon Neutral Public Service" (<http://www.mfe.govt.nz/issues/sustainability/cabinet-papers/pol-07-131.html>), states "a lead group of six agencies (Ministries of Economic Development, Environment and Health, Department of Conservation, Inland Revenue, and Treasury) will have 'carbon neutral plans' in place by early 2008 and be carbon neutral by 2012, with the [28 Public Service departments] to be on the path to carbon neutrality by 2012."

# Workplace travel planning

Travel planning is included in this paper as an illustration of the wider interest of the travel category in the Govt<sup>3</sup> programme. In this context it excludes the home to work commute.

A workplace travel plan is a general term for a package of measures tailored to the needs of an individual organisation and aimed at promoting travel choices with lower environmental impacts. Travel planning is seen as a necessary tool to help ensure the government's carbon neutral goals are achieved by 2012.

## **MANDATORY REQUIREMENTS**

### ***Workplace Travel Planning***

- All Public Service departments must have a workplace travel plan in place by 2010 that aims for a 15 per cent reduction in kilometres travelled<sup>10</sup>.  
Departmental emissions reductions plans and actions must:
  - ~ Identify and pursue the most cost-effective and environmentally beneficial means of lowering emissions, measured over the whole of life of an intervention;
  - ~ Meet the particular needs and profile of each department ; and
  - ~ Not result in reduced departmental performance
- In order to meet the requirement (above) on travel plans, all new travel-related contracts (eg, including but not limited to: use of vehicles, taxis and air travel), must include the requirement that suppliers provide year-on-year reports on annual kilometres travelled.

## **Guidance**

The following guidance notes have been developed to help government departments implement the standard and target for the Workplace Travel Planning:

1. A workplace travel plan should look at behaviours and habits in the generation of demand, and whether these need to be addressed and changed. Examples of this are:
  - Reducing workplace travel by using technology (see *Video Conferencing* later in this document)

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<sup>10</sup> CAB Min (07) 18/7 and CAB Min (07) 17/2C refers.

- Considering alternative forms of transport, eg, public transport, in-house shuttle services, taxis, rental cars, cycling and walking
  - Raising the awareness of individual drivers to drive more efficiently to reduce emissions and fuel consumption. Fuel\$aver on the Land Transport NZ website has a useful calculator for identifying fuel consumption through driving habits: [www.fuelsaver.govt.nz](http://www.fuelsaver.govt.nz).
2. MfE will be providing a tool to enable departments to report on annual kilometres travelled, using information supplied by travel providers as part of their required reporting to departments.
  3. Land Transport NZ will have a workplace travel planning tool available towards the end of 2007.

# Video conferencing

The purpose of the following Video Conferencing requirements is to encourage greater use of technology (eg, video conferencing) to reduce workplace travel.

## **TARGETS**

### ***Video Conferencing***

Public Service departments are expected to:

- include consideration of video conferencing as part of an overall strategy in the Travel Plan to reduce workplace travel and enhance departments to connect through the use of technology
- engage with key management/stakeholders in the department in determining the best 'fit for purpose' by specifying equipment of an appropriate technological standard to maximise the benefits of using video conferencing.

## **Guidance**

The following guidance notes have been developed to help government departments meet the target for the Video Conferencing Category:

1. As part of the procurement planning phase, consider the following:
  - What is the business fit of video conferencing to your department? Is there existing key management/stakeholder buy-in?
  - Do video conferencing facilities already exist within the organisation and if so, is full use being made of them? If not, are the facilities adequately publicised to raise staff awareness?
  - Have staff been trained how to use the facility?
  - Do staff know how to check availability or make a booking? Is it simple to do so?
  - Could other departments in the same geographic location share existing video conferencing facilities?
  - If planning to acquire video conferencing equipment, is there scope to look at a joint procurement or joint use with another department?

If video conferencing is an 'untried' or 'unfamiliar' technology in the department – or if lack of funding is an issue – consider using a provider of casual conferencing facilities (ie, through a 'bureau' type arrangement) to test

acceptability and encourage familiarity. Alternatively, consider leasing or hiring equipment.

2. When considering the decision to purchase, input from your organisation's IT department (or an external IT expert if there is no suitable internal expertise available) is required from the beginning of the project. For example, the capacity and capability of the existing IT infrastructure will need to be examined and tested to ensure that running a video conferencing system will not adversely affect other key systems (ie, email). If this is the case, investment in the infrastructure will be required prior to any conferencing equipment being purchased, and may be subject to a separate business case.
3. For video conferencing to be effective, connection via ISDN or Voice Over IP (VOIP) is required to enable fast transmission speeds. (See the case study on Multipoint Desktop Video Conferencing<sup>11</sup> which includes more detail on technical requirements).
4. Video conferencing facilities can be used in three ways, therefore consult with key management/stakeholders to determine the best 'fit for purpose':
  - Point to point: Similar to a phone call, where two video conferencing systems are directly connected
  - Point to Multi Point: A connection allowing one site ('main') to link to other sites, enabling them to interact (eg, for training sessions). The 'main' site must have a video conferencing unit with multipoint conferencing facilities built in
  - Multi Point: Where more than two sites are able to take part in a conference and all parties are visible and able to interact. Most systems will have either a four-site or 12-site multi-connection unit built in.
5. Consideration of other peripheral equipment early in the planning phase may potentially involve additional expenditure, but may bring future benefits (eg, increased flexibility). Such peripheral equipment might include:
  - Data collaboration
  - Video streaming and recording
  - Peripheral equipment:
    - ~ Document camera to transmit documents or objects
    - ~ Whiteboard to transmit drawings
    - ~ PC to transmit files

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<sup>11</sup> "Multipoint Desktop Videoconferencing: technology and implementation for New Zealand business and education" by Carole L. Teixeira ([www.naccq.ac.nz](http://www.naccq.ac.nz))

~ VCR to transmit video.

6. Ensure that as part of the commissioning of the equipment, the supplier carries out connectivity and operational checks to/from all locations to be linked once the equipment is installed.

*NB: Video conferencing equipment will be covered further in the Category Review for ICT equipment, to be published in late 2007.*

# Air travel

Staff of government departments are asked to examine the need and demand for workplace air travel within their organisations.

## **TARGET**

### **Air Travel**

Public Service departments are expected to:

- seek ways of reducing the amount of workplace air travel for incorporation into the travel plan (see “Travel Planning” earlier in the paper) and
- actively work with air travel providers on ways of reducing carbon emissions<sup>12</sup>.

## **Guidance**

The following guidance notes have been developed to help government departments meet the targets for the Air Travel:

1. Reduce the amount of workplace air travel by engaging in alternative “meeting methods”, eg, video conferencing (see earlier section).
2. Further information will be available on travel offsetting and reduction programmes in due course through the ‘Towards a Carbon Neutral Public Service’<sup>13</sup> initiative.
3. A carbon costing methodology and procurement policy to incorporate a price of carbon into procurement decisions will also be developed (as part of the Towards a Carbon Neutral Public Service initiative) in conjunction with the MfE and the Treasury. The cost of carbon proxy measure would be used as a procurement decision-making tool rather than reflecting an actual direct cost to be incurred.

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<sup>12</sup> In the context of this paper, ‘reducing carbon emissions’ means (for example) working with providers to find the least emission intensive flights, or sourcing direct flights rather than ones that include stop-overs. It does not include carbon offsetting.

<sup>13</sup> POL (07) 131: “Towards a Sustainable New Zealand: Carbon Neutral Public Service”  
<http://www.mfe.govt.nz/issues/sustainability/cabinet-papers/pol-07-131.html>

# Motor vehicles

Almost all vehicles on our roads are powered by fossil fuels – either petrol, diesel, or road fuel gases. About 80 per cent of the energy used in a car is simply lost, 19 per cent moves the vehicle, and only 1 per cent is used to carry the driver<sup>14</sup>.

This category review examines motor vehicles under the three pillars of sustainability – environmental (eg, reducing emissions), economic (eg, promoting vehicle maintenance) and social (eg, vehicle safety and behavioural aspects of the driver).

## Safety ratings

### **MANDATORY STANDARD**

#### ***Motor Vehicles – Safety Ratings***

Public Service departments **must** (wherever practicable) purchase, lease or hire vehicles with a minimum safety standard rating of ANCAP 4 (or EuroNCAP 4)<sup>15</sup>, where ANCAP (or EuroNCAP) testing has been carried out for the vehicle model.

#### **Exceptions**

- Where there is a limited choice of ANCAP (or EuroNCAP) tested vehicles that achieve the 4-star standard (i.e. three or less vehicles); **OR**
- Where a vehicle model has not been tested under the ANCAP or EuroNCAP testing regime,

departments may make a selection based on the safety features of the vehicles under consideration.

If making a features-based selection, departments should consider the following in their safety features requirements (this is not an exhaustive list):

- Electronic stability control;
- Number of airbags (including side and curtain);
- Safety belt reminders;
- Three point seat belt for centre rear seat;
- Driver's knee impact zone.

Departments will need to make a selection based on information available<sup>16</sup>, their

<sup>14</sup> <http://www.mfe.govt.nz/issues/transport/sustainable/vehicles.html>

<sup>15</sup> ANCAP is the Australasian New Car Assessment Programme that assesses models for the Australian domestic market. It should be noted that the same model in NZ may have a different specification (including safety) and may receive a different ANCAP rating as tested. ANCAP has a similar rating to the European NCAP, but differing standards from the American and Japanese assessment programmes.

own procurement policy/ies, and operational requirements. Where further technical support and advice is required, departments are encouraged to 'buy in' this expertise from the New Zealand Transport Agency (<http://www.nzta.govt.nz/index.html>)

**IMPORTANT NOTE:** Any vehicle's crash performance is more than the sum of its safety features. The only way to truly judge the effectiveness (in performance) of a vehicle's safety features is under crash-test conditions, such as the ANCAP or EuroNCAP testing regime.

## **TARGETS**

### ***Motor Vehicles – Safety Ratings***

Public Service departments are expected to:

- consider vehicles with safety ratings higher than ANCAP 4 when available, for all vehicles purchased, leased or hired
- give priority consideration to vehicles fitted with an electronic stability control system (ESC) for delivery from 2008 when ESC is available and practicable for purpose (for all vehicles purchased, leased or hired)
- consider vehicles with additional safety features (eg, active seat belt reminders), for all vehicles purchased, leased or hired and
- develop a safe driving policy for all drivers engaged in driving vehicles that are purchased, leased or hired.

## **Guidance**

The following guidance notes have been developed to help government departments meet the targets for safety ratings:

1. Safety ratings are based on crash test results with 'stars' being awarded for performance in both front offset, side and (in some cases) pole impact tests for occupant protection. The more stars in both tests, the better.
2. An electronic stability control system uses sensors to detect a car going out of control (for example if the rear end slides out when turning a corner), brakes individual wheels, and reduces throttle to help bring the car back into control. Overseas analyses indicate these systems have a high rate of effectiveness in single-vehicle, loss-of-control type accidents and has the potential to save lives. An electronic stability control system can also be known by trade names, such as Electronic Stability Programme (ESP), Dynamic Stability Control (DSC) and Vehicle Stability Assist (VSA).

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<sup>16</sup> Other information sources include RightCar (<http://www.rightcar.govt.nz>), FutureFleet (<http://www.futurefleet.co.nz>), How Safe is Your Car? (Aus) ([www.howsafeisyourcar.com.au](http://www.howsafeisyourcar.com.au))

3. See the following resources:

- The paper “Current Government Fleet and Procurement Practice” (<http://www.mfe.govt.nz/publications/sus-dev/government-fleet-procurement-practice-octo6/government-fleet-procurement-practice-octo6.pdf>) details a review of the government fleet carried out during 2005/06 by MfE and MoT. It gives further background information around the standards included in this document as well as case studies from various public sector organisations. In addition, MoT has recently completed a 2006/07 review of the government fleet and a summary and evaluation report will be published in the near future.
- The ANCAP crash test results on the Land Transport NZ website (<http://www.landtransport.govt.nz/vehicles/ancap>) enables users to view and compare safety ratings of vehicles by selecting a make and model or vehicle type from a drop-down list
- Also on the MoT’s SafeAs website, “New Vehicle Safety Feature Recommendations” (<http://www.safeas.govt.nz/smf/index.php?action=dlattach;topic=579.0;attach=35>) contains further useful guidance on general safety items to consider when procuring new vehicles.

## Reducing harmful emissions

Reducing emissions is an important part of improving air quality.

### **MANDATORY STANDARD**

#### ***Motor Vehicles – Reducing harmful emissions***

Public Service departments must:

- require tenderers to state the emissions standard for the vehicle(s) proposed in their responses to all tender exercises to purchase, lease or hire vehicles and
- purchase, lease or hire vehicles with a minimum emissions standard of at least Euro 4 (or equivalent)<sup>17</sup>.

### **TARGET**

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<sup>17</sup> See <http://www.landtransport.govt.nz/rules/vehicle-exhaust-emissions-2006.html#22> for further information on emission standards.

### ***Motor Vehicles – Reducing harmful emissions***

Public Service departments are expected to:

- consider vehicles with higher emissions standards when available<sup>18</sup> for light and heavy duty vehicles purchased, leased or hired and delivered from the end of 2010
- remove older vehicles (ie, pre-Euro 4 or equivalent), which are likely to be high emitters, from departmental vehicle fleets that are owned or leased by 2010 or earlier, wherever possible.

### **Guidance**

The following guidance notes have been developed to help government departments meet the targets for reducing harmful emissions:

1. Emissions can be reduced through specifying ‘cleaner’ vehicles when sourcing for purchase, lease or hire, and ensuring vehicles are maintained regularly (eg, replacement of air, oil and fuel filters), in accordance with the manufacturer’s recommendations.
2. The “Green Vehicle Guide” (<http://www.greenvehicleguide.gov.au>) is an Australian Government website that enables users to view and compare the emissions of different vehicles by selecting from a drop-down list.

### **Fuel consumption**

**Targets for reduction in fuel consumption are to be included in the Travel Plan.**

#### ***MANDATORY REQUIREMENT***

##### ***Motor Vehicles – Fuel consumption***

Public Service departments must:

- require that tenderers submit fuel economy information in their responses, and to include fuel economy as a criterion in tender evaluations for all new tender exercises for vehicles to be purchased, leased or hired.

#### ***TARGETS***

##### ***Motor Vehicles – Fuel consumption***

Public Service departments are expected to:

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<sup>18</sup> Euro 5 standard for petrol-operated vehicles and diesel-operated heavy vehicles (ie, over 3.5 tonnes) are expected to be available from 2010.

- actively reduce fuel consumption across the department's fleet of light motor vehicles (ie, cars, vans and small trucks), and highlight the methods to be used in the Travel Plan (eg, changing drivers' habits and behaviours) and
- incorporate in specifications the 'point-of-sale' labelling information for fuel consumption for light vehicles, once it becomes available.

## Guidance

The following guidance notes have been developed to help government departments meet the targets for fuel consumption:

1. Consider purchasing, leasing or hiring vehicles that have the best fuel economy but are fit for purpose. The MfE website contains data on sample figures along with 'whole of life' costings: [www.mfe.govt.nz/publications/sus-dev/government-fleet-procurement-practice-octo6/html/page7.html](http://www.mfe.govt.nz/publications/sus-dev/government-fleet-procurement-practice-octo6/html/page7.html).
2. The Land Transport NZ Fuel\$aver website – <http://www.fuelsaver.govt.nz/index.html> – contains a calculator to help determine not only how much is spent on fuel, but how much could be saved. It uses a formula based on the make and model of car, distance travelled, type of fuel used, and driving habits.
3. EECA is developing a mandatory point-of-sale labelling scheme for all light vehicles (ie, cars, vans and small trucks) that may, in future, be used in specifications for vehicles. A star rating will be used to denote fuel consumption and display an annualised cost of fuel. The scheme is expected to come into force in early March 2008. When available, information on the scheme will be made available on the Land Transport NZ Fuel\$aver website. EECA is currently consulting on this scheme and has published a discussion document: <http://www.eeca.govt.nz/eeca-library/transport/report/vehicle-fuel-economy-discussion-document-o6.pdf>.

## Renewable fuels

The New Zealand Government has announced a biofuels sales obligation that will require fuel companies to start selling biofuels from 2008. The obligation will start on 1 April 2008 if the legislation is completed in sufficient time, although some fuel companies may start selling biofuels before this. For further information about the sales obligation, see the Ministry of Transport website:

<http://www.transport.govt.nz/biofuels-440-index/>.

By the time the Biofuels Sales Obligation commences, the government will introduce and monitor comprehensive specifications for the quality of biofuels and biofuel blends. See also the information below on the biofuel eco-label.

## **TARGETS**

### **Motor Vehicles – Renewable fuels**

Public Service departments are expected to:

- invite suppliers to include options for the use of renewable fuels in their responses to tender exercises for the purchase, lease or hire of vehicles. Renewable fuels include biofuels, electric, and road fuel gases
- consider in tender evaluations that, when available, all petrol-driven vehicles purchased, leased or hired are able to run on bio-ethanol-petrol blends of 10 per cent ethanol
- consider in tender evaluations that, when available, all diesel-driven vehicles purchased, leased or hired are able to run on low-level blends of bio-diesel
- consider, when available, electric vehicles that utilise renewable electricity

For passenger and light commercial vehicles only:

- specify longer life – and less polluting – synthetic and vegetable lubricating and hydraulic oils rather than mineral oil, whilst also ensuring these comply with the manufacturers' specification and recommendations.

## **Guidance**

The following guidance notes have been developed to help government departments meet the targets for renewable fuels:

1. EECA has produced fact sheets on bio ethanol blended petrol and bio diesel:
  - <http://www.eeca.govt.nz/renewable-energy/biofuels/bioethanol/index.html>
  - <http://www.eeca.govt.nz/renewable-energy/biofuels/biodiesel/indexnew.html>
2. When considering alternative, renewable fuel types, it is important to remember that vehicle maintenance and servicing periods will differ from 'traditional' petrol and diesel-driven vehicles.

## **Vehicle maintenance**

Vehicles must undergo regular maintenance to perform to the optimum level of efficiency in terms of usage and emissions, and remain cost effective.

## **MANDATORY REQUIREMENTS**

### ***Motor Vehicles – Vehicle maintenance***

For fleet leased or hired, Public Service departments must:

- specify that suppliers must provide evidence that vehicles supplied are regularly maintained in accordance with the manufacturer's recommendations, with immediate effect.

For all fleet vehicles, whether purchased, leased or hired Public Service departments must:

- specify that suppliers of contracted vehicle maintenance services are working to the standards contained in this document on tyre and used oil disposal, with immediate effect.

### **TARGETS**

#### ***Motor Vehicles – Vehicle maintenance***

For fleet purchases, Public Service departments are expected to:

- have a planned preventative maintenance programme in line with the manufacturer's recommendations and specifications<sup>19</sup> for all vehicles in the fleet; and
- have a fully auditable maintenance record that includes a history of all work carried out and associated costs for all vehicles in the fleet.

### **Guidance**

The following guidance notes have been developed to help government departments meet the targets for vehicle maintenance:

1. Ensure that when tendering for vehicles, the cost of maintenance and servicing is quoted separately from the cost of the vehicle, especially if there is an existing separate contract for vehicle servicing. This enables an informed judgement to be made regarding where and how the vehicle is to be serviced (ie, as part of a

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<sup>19</sup> It is acknowledged that some agencies may elect to have their vehicles maintained on a more frequent basis.

manufacturer's warranty deal or under a separate vehicle servicing contract), and ensures that the maintenance and servicing costs are not counted twice.

2. Specify the regular servicing of vehicles in accordance with the manufacturer's recommendations and specifications, and the use of the correct fuel and lubricants to ensure emission control systems remain effective. Specify also that all vehicles are regularly tested using gas analysis equipment, to check they are running at optimum efficiency.

## Eco-labelling

### **TARGET**

#### **Motor Vehicles – Eco-labelling**

Public Service departments are expected to:

- ensure that as, and when, motor vehicle eco-labelling is ratified, it is included in tender specifications and evaluations, and contract documents.

## Guidance

The following guidance notes have been developed to help government departments meet the target for motor vehicle eco-labelling:

1. The government has approved the implementation of a mandatory 'Vehicle Fuel Economy Labelling' scheme with the aim of having it in the market by the end of 2007. It will cover new and used vehicles where information is available.
2. EECA has produced a 'biofuel' label (see right) to indicate that the fuel being sold meets quality specifications. The label can only be used by retailers and suppliers that meet the specifications. It is important to use biofuel blends of the correct quality to avoid engine problems.
3. Land Transport NZ is preparing a suite of sustainability ratings which will bring together information into one tool. This tool will inform choices in terms of safety, low emissions, 'end-of-life' considerations and fuel efficiency (using EECA's ratings – see above). Although these ratings will not be mandatory, it will be considered good practice to incorporate them into tender specifications.



## End-of-life considerations – recycling and recovery

### **MANDATORY REQUIREMENTS**

### ***Motor Vehicles – End of life considerations***

Public Service departments must:

- as part of a tender specification for the purchase of vehicles, to require suppliers to provide information on vehicle parts recycling and other disposal options they may offer and
- as part of a tender specification for tyre disposal services, to specify that suppliers must meet the requirements of the “Tyre Track” scheme or similar.

### ***TARGET***

#### ***Motor Vehicles – End of life considerations***

Where provision of goods or services results in a requirement to dispose of used oil, Public Service departments are expected to:

- work with suppliers to ensure that it is handled in accordance with the ‘Guidelines for the Management and Handling of Used Oil’ published by MfE: <http://www.mfe.govt.nz/publications/waste/used-oil-guide-decoo.html>.

### **Guidance**

The following guidance notes have been developed to help government departments meet the standards and target for end-of-life considerations:

1. ‘Tyre Track’ ([www.tyretrack.co.nz](http://www.tyretrack.co.nz)) is an initiative by the Motor Trade Association (MTA). MTA’s website includes a list of registered collectors (by location) who have undertaken to manage the disposal of old tyres responsibly. MfE and the industry are currently investigating the potential to extend Tyre Track to take more responsibility for end-of-life tyre reuse and recycling (referred to as ‘product stewardship’).
2. MfE is currently working towards the enhancement of the used oil recovery programme. Pending the issue of that document, the options for disposal of used oil are described in the MfE document “Used Oil Recovery Reuse and Disposal in New Zealand – Issues and Options”:  
<http://www.mfe.govt.nz/publications/waste/used-oil-recovery-decoo.pdf>

# Category Review

## Light fittings

**This Category Review for Light Fittings provides guidance for procurement practitioners and information on targets and standards.**

### Introduction

Lighting accounts for one-third of the energy used in commercial spaces. About half of the lighting is wasted either through inefficient bulbs, poor design or improper maintenance.<sup>20</sup>

Substantial savings can be made in this area by designing and installing the right units and controls, and ensuring they are adequately maintained. Substantial energy savings can also be made through use of the most efficient equipment. Substituting of standard units with high efficiency lighting units can typically generate energy savings of between 20 and 70 per cent.

A key requirement of achieving a carbon neutral Public Service is to reduce emissions through energy efficiency measures. There is significant technical potential to reduce greenhouse gas emissions from lighting. In the majority of lighting installations, efficient lighting technologies are readily available which, if adopted, would significantly reduce energy consumption. Other measures may include conducting energy use audits and educating staff to use less electricity.

The behaviour of individuals has a part to play in reducing energy consumption and cost, as lights are often left on when not needed. Equally, people working in a room or building will often turn on all the lights when they are only occupying a small section of it. Good lighting control systems ensure that lights are only on when needed. Whilst technically it is straightforward to fit products or lighting systems to existing buildings to help significantly reduce the amount of energy being used, it is often difficult to achieve a reasonable payback. It is best to ensure that lighting is considered in the building design stage or is upgraded during refurbishments.

End-of-life considerations are included in this section as there are potential environmental and human health impacts in the recycling and disposal of different lighting products; these are covered in each sub-category (see also MfE's factsheet on "The Safe Use and Disposal of Household Lamps"):

<http://www.mfe.govt.nz/publications/waste/disposal-household-lamps-mar07/disposal-household-lamps-mar07.html>.

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<sup>20</sup> MfE "Lighting": <http://www.mfe.govt.nz/publications/sus-dev/office-fitouts-deco5/html/page12.html>

## Scope and aim of review

For the purpose of this review, “light fittings” includes lamps and tubes for building interior use, lighting control equipment and luminaires (fittings). To support this review, a Light Fittings Category Review Team has been established that will on an ongoing basis:

- Work with relevant government departments to build on the work already done and identify minimum standards and targets (improving sustainability) for the category, based on sustainability attributes or impacts. These standards and targets become the minimum requirement for all future procurements<sup>21</sup> for the Light Fittings Category Review
- Develop reference material (including guidance, tools and templates) to assist procurement practitioners in meeting these standards and targets, and to assist their departments in developing and achieving their carbon neutrality plan<sup>22</sup> and meeting Govt<sup>3</sup> commitments
- Encourage procurement practitioners to take a more holistic approach to procurement within this category, including working with their departments to develop the required measurement and reporting regimes
- Provide a continuous improvement programme, to review, validate and improve existing standards and develop related additional standards and targets together with associated reference material that will be introduced over time.

## General considerations

There are a number of considerations when procuring light fittings:

- Utilising eco-labelling standards (eg, Energy Star) as, and when, they become available to set minimum energy performance standards (MEPS)
- To specify and source appropriate product for the purpose, being mindful of the lighting design
- End-of-life considerations (disposal/recycling).

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<sup>21</sup> Criteria around sustainability should be included in evaluation criteria; however the weighting that sustainability takes should be considered on a case-by-case basis.

<sup>22</sup> POL (07) 131: “Towards a Sustainable New Zealand: Carbon Neutral Public Service” (<http://www.mfe.govt.nz/issues/sustainability/cabinet-papers/pol-07-131.html>), states “a lead group of six agencies (Ministries of Economic Development, Environment and Health, Department of Conservation, Inland Revenue, and Treasury) will have ‘carbon neutral plans’ in place by early 2008 and be carbon neutral by 2012, with the [28 Public Service departments] to be on the path to carbon neutrality by 2012.”

## Guidance

The following guidance notes have been developed to help government departments meet the targets for eco-labelling and minimum energy performance standards (MEPS); lighting design and fit for purpose; and end-of-life considerations:

### ***Eco-labelling and minimum energy performance standards (MEPS)***

1. EECA has undertaken to create MEPS for lighting, and continues to work on product standards and labelling of lamps technology for industry and consumers in New Zealand. EECA is working with the US on adopting the voluntary 'Energy Star' standards and have an agreement for the use of the brand which is already widely used in New Zealand for domestic appliances. Before being adopted for light fittings in New Zealand, Energy Star standards will have to be adapted to suit local conditions, eg, voltage requirements.
2. Work on trans-Tasman standards to introduce energy efficiency standards for lighting is in the early stage of development. In partnership with industry, EECA intends to adopt similar measures to those outlined in the Australian Greenlight Strategy: <http://www.energyrating.gov.au/library/pubs/200418-greenlight.pdf>. Chapter 7 of the Australian strategy discusses measures to reduce energy consumption from lighting. It has MEPS and energy efficiency labelling and information disclosure as mandatory measures.
3. The standards and targets contained in this Category Review paper will be updated with the New Zealand and trans-Tasman standards, as, and when, they are finalised. The reference material and guidance included in this paper is based on European product standards that exist. They may be used as a guide and are already used on goods imported into New Zealand.

### ***Lighting Design and Fit for Purpose***<sup>23</sup>

Poor lighting installation design can negate many of the gains of using more efficient lighting equipment. For example, using more fittings than needed, or locating light switches in places that are inconvenient or impractical for occupants to use in isolated areas.

Installation efficiencies, as well as lamp and luminaire efficiencies, must be addressed in new building design and major refurbishments.

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<sup>23</sup> Refs: EECA's technical guide: 'Improving Office Lighting' (<http://www.eecabusiness.govt.nz/emprove/emprove-library/energy-use/equipment/lighting/guide/technical-guide-improving-office-lighting.pdf>) and the UK's 'Carbon Trust' website: [http://www.carbontrust.co.uk/energy/startsaving/tech\\_lighting\\_more\\_efficient\\_equipment.htm](http://www.carbontrust.co.uk/energy/startsaving/tech_lighting_more_efficient_equipment.htm)

When considering the purchase of lighting for specific areas (including refurbishments), ensure lighting needs and systems are taken into account with a view to making energy and financial savings and reducing environmental impact, whilst at the same time being mindful of design for the 'visual environment'.

1. EECA has produced a useful factsheet for improving industrial lighting in the design and product specification stages, examining no/low cost and higher cost options: <http://www.eeca.govt.nz/eeca-library/products/lighting/guide/improving-industrial-lighting-guide-03.pdf>

Examples include:

- Use of daylight: Arrangement of work areas near to windows so people can use daylight, but ensure that they are not dazzled or distracted by direct sunlight through windows or reflections on the screen. Ideally, light for manual tasks should come from the "non-writing" side of the desk. Switching should also be arranged so people who have daylight available can also switch off the lighting near their workstation.
  - Use of task lighting for specific applications.
  - Removal of unnecessary lamps: Sometimes office rearrangement can mean areas used as passageways have more lighting than they need. In other areas, over-lighting can result from a design that provides too many fittings and lamps. Energy savings of 5 to 15 per cent can often be made by selectively removing lamps from these areas. Empty holders should also be marked to avoid accidental re-lamping by maintenance personnel (suitable stickers are available from EECA).
  - Bright lamps should be replaced with low-power lamps in over-lit areas (refer to the 'Replacement Opportunities' chart later in this section).
2. Before making any changes, ensure that Occupational Safety and Health requirements have been met.

### ***End-of-life considerations***

#### **TARGET**

#### ***Light Fittings – End of life considerations***

Public Service departments are expected to:

- have in place a tendered contract for the safe collection, recycling, and/or disposal of hazardous products under this category (by the end of 2008).

In conducting tender exercises for light fittings, practitioners should:

- Require that all hazardous lamps, luminaires and fittings are recycled and/or disposed of in a safe and appropriate manner
- Request suppliers to provide information on end-of-life product handling and disposal
- Ensure recycling and/or safe disposal of hazardous lamps, tubes and fittings is included as part of a government department's organisation-wide waste management strategy.

# Lamps and tubes

## TARGET

### Lamps and tubes

Public Service departments are expected to:

- progressively upgrade existing lighting by specifying that replacements be 'new-generation' lamps, reflectors and lenses to improve performance and increase efficiency (upgrade to be completed by end of 2008).

## Guidance

The following guidance notes have been developed to help government departments meet the target for lamps and tubes:

1. In conducting tender exercises for lamps and tubes, practitioners should specify lamps and luminaires that are fit for the purpose for which they are required, (eg, cogniscent of the user's requirements)
2. Lamps and luminaires must be maintained regularly and promptly replaced when required, to retain efficiencies.

### Replacement opportunities<sup>24</sup>

The following table helps to identify different types of bulbs and whether there might be a more efficient alternative.

Existing lamp type	Energy-efficient option	Energy saving/benefit
General lighting service bulbs (incandescent)	Replace with compact fluorescent lamps (CFLs) in the same fitting. Ensure they are 'fit for purpose' (ie, deliver appropriate levels of light) <sup>25</sup>	75% plus longer lamp life
Remove and replace	Replace entire fitting with a	8% plus

<sup>24</sup> Extract from the UK's Carbon Trust website:

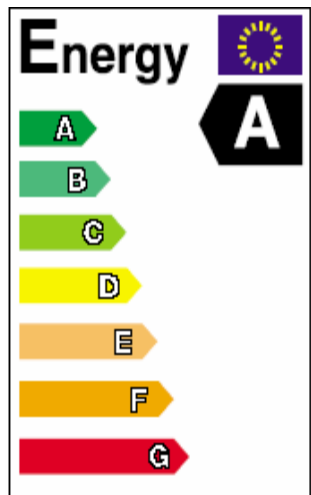
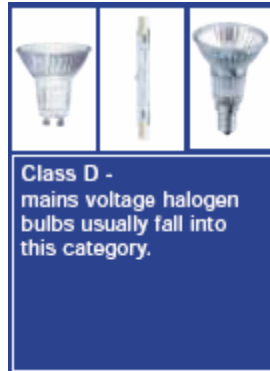
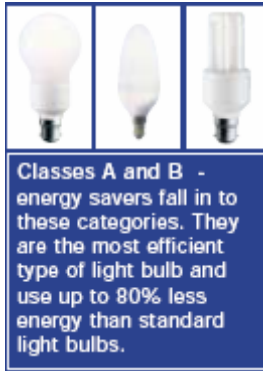
[http://www.carbontrust.co.uk/energy/startsaving/tech\\_lighting\\_more\\_efficient\\_equipment.htm](http://www.carbontrust.co.uk/energy/startsaving/tech_lighting_more_efficient_equipment.htm)

<sup>25</sup> Take care where tungsten lighting is used as task lighting for rotating machinery in workshops. Replacing with CFLs can cause a stroboscopic effect, so tungsten can sometimes be the safest option. An alternative is to use a CFL fitting with high-frequency electronic control gear, which eliminates the stroboscopic effect.

Existing lamp type	Energy-efficient option	Energy saving/benefit
38mm (T12) fluorescent tubes in switch-start fittings	higher efficiency unit, and equivalent 26mm (T5) triphosphor fluorescent tubes of lower wattage	longer lamp life
High-wattage filament lamps or tungsten halogen lamps as used in floodlights	Replace with metal halide or high wattage compact fluorescent lighting	65-75% plus longer lamp life
Mains voltage reflector lamps, filament spot and flood types	Replace with low-voltage tungsten halogen lighting	30-80% for equivalent lighting performance
Fluorescent fittings with the old 2ft 40W, and 8ft 125W fluorescent lamps (T12)	Replace with modern efficient fittings using reflectors/louvres or efficient prismatic controllers with high-frequency electronic or low loss control gear and triphosphor lamps	30-45% with much improved lighting quality. The use of high frequency electronic control gear eliminates flicker, hum and stroboscopic effect
Fluorescent fittings with opal diffusers or prismatic controllers which are permanently discoloured	Replace with new prismatic controllers or replace complete fittings as above	No reduction in energy consumption but by increasing the amount of light by between 30% and 60%, may enable a tube to be removed

## Eco-labelling

Currently there are no specific New Zealand eco-labels for light fittings, therefore European energy rating labels have been included here *as a guide only*. This paper will be updated with New Zealand eco-labels as and when they become available.



### Maintenance of lamps and tubes

As lighting systems age, light levels on desks and other working surfaces can drop by over 50 per cent. This reduction may be due to loss of output from the lamps and dirt on room surfaces. This can be reduced by bulk-replacing lamps and cleaning or repainting room surfaces in light colours to raise illumination levels.

Failed fluorescent tubes must be removed or replaced promptly, as they can sometimes continue to use power even when the tube has failed. For a mains frequency tube this could be around 25 per cent of rated tube power. High frequency fittings could use around 10 per cent of the tube rating. Electronic ballasts produced more recently have automatic end-of-life switch-offs that electrically deactivate 'dead' tubes.

### End-of-life

MfE is currently working on a set of recycling guidelines based on the European Waste Electronic and Electrical Equipment (WEEE) recycling standards. The MfE

guidelines will form the basis for performance standards that will be a requirement for product stewardship schemes for waste electronic and electrical equipment<sup>26</sup> due to be issued in early 2008.

Older installations may contain toxic chemicals called polychlorinated biphenyls (PCBs). As it is no longer legal to use equipment containing PCBs, checks of older installations should be performed by an electrical contractor, and PCB containing equipment replaced as soon as possible.

### ***The Stockholm Convention and fluorescent tube ballasts***

New Zealand has signed up to the Stockholm Convention which commits countries to stop manufacturing and using persistent organic pollutants (POPs) and to minimise the release of these chemicals into the environment. POPs are toxic chemicals that persist in the environment. Their toxic impacts become stronger as they move through the food chain and increase in quantity in the fatty tissues of birds, mammals and humans.

Twelve chemicals are presently listed as POPs under the Stockholm Convention. The chemicals are a group of pesticides (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene), industrial chemicals (PCBs), and dioxins and furans that are unintentional by-products of combustion or of the manufacture of some chlorine-containing chemicals.

PCBs were used in New Zealand's electricity industry and most stocks have already been collected and disposed of. Arrangements will be made by MfE to safely dispose of remaining stocks that are collected, including the small PCB ballasts associated with fluorescent tubes made before 1980.

Lighting Council New Zealand is working with the Ministry for the Environment to publicise appropriate methods of handling PCBs and their disposal. Please contact Howard Ellis at MfE for more information on the disposal of fluorescent ballasts over 20 years old. Email: [howard.ellis@mfe.govt.nz](mailto:howard.ellis@mfe.govt.nz) or phone: (04) 439 7437.

### ***Disposing of lamps safely***<sup>27</sup>

Incandescent lamps may be disposed of with domestic-type rubbish. Wrap any broken glass in newspaper to prevent injury during handling of the rubbish bags.

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<sup>26</sup> Product stewardship schemes are 'cradle to grave' tools that help reduce the environmental impact of manufactured products. In such schemes, producers, brand owners, importers, retailers, consumers and other parties accept responsibility for the environmental effects of their products, from the time they are produced until they are disposed of.

<sup>27</sup> Extract from 'The safe use and disposal of household lamps' published by MfE: <http://www.mfe.govt.nz/publications/waste/disposal-household-lamps-mar07/disposal-household-lamps-mar07.pdf>

Energy saving and other mercury-containing lamps such as fluorescent tubes should be recycled to ensure that the mercury is collected and recycled in an environmentally safe manner. Where there is a requirement for a bulk disposal of lamps and tubes (for example a larger building or facility that is carrying out a bulk upgrade of its lighting), it should be opened up to competition using the standards and guidance for disposal detailed in this paper in the specification and evaluation phases. For smaller departments or where there are low volumes, departments may wish to 'pool' this service with others nearby to reduce costs.

If a fluorescent lamp breaks, the greatest risk is being cut by broken glass. As a precaution, gloves should be worn when handling the broken lamp and doors and windows should be opened to ventilate the room. Wipe the area with a damp paper towel to pick up any smaller shards of glass, powder or liquid. An eye dropper or syringe can also be used to collect up any droplets of liquid. Do not vacuum the site as this can disperse the particles. Dispose of the paper towels, gloves and any cloths used to clean the area by placing in a plastic bag with domestic rubbish.

# Lighting control equipment

## Guidance

In conducting tender exercises for lighting control equipment, practitioners should specify one of the following types:

- Lighting equipment that is switched on only when needed, thereby minimising energy consumption (ie, high efficiency); or
- Lighting equipment that is regulated in terms of light output (and energy consumption) to take full advantage of daylight availability (ie, dimmable).

## Types of lighting control equipment<sup>28</sup>

The types of lighting control equipment referred to above are listed to aid in the selection process:

Type	Function
Time controller	Automatic time switch device to switch lighting 'on' and/or 'off' at predetermined times or intervals.
Presence detector and controller	Automatic device detecting occupancy or movement in an area to switch lighting 'on' and 'off' according to occupancy needs.
Daylight detection and switching controller	Device to monitor daylight availability in an area and control the switching of lighting 'on' and 'off' in line with occupants needs.
Daylight detection and regulation controller	Device to monitor daylight availability in an area and regulate the light output of the electric lighting to provide only sufficient artificial lighting to supplement the daylight component. Generally used in conjunction with high frequency fluorescent luminaires equipped with dimmable lighting control equipment.
Central control unit	Control unit for an overall managed lighting control system utilising some or all of the types of control elements listed above

<sup>28</sup> Extract from UK's "ECA ENERGY TECHNOLOGY CRITERIA LIST – TECHNOLOGY: LIGHTING"

## **Fitting timers or occupancy detectors<sup>29</sup>**

Timers that switch lights off after a pre-set period may provide a suitable solution for open plan offices or large conference rooms where it is difficult to make an individual responsible for turning off the lights at the end of the day. They can also be useful for isolated areas visited for short periods such as toilets or stock rooms. Some timers give a warning before switching the lights off and can be re-set if light is still required. The lights can still be turned off manually, so labelling is desirable to help ensure they are not inadvertently switched off if timers are mounted centrally.

Occupancy detectors are another solution in open-plan office areas and conference rooms where the lights are often left on when they are not needed. They turn the lights off if they have not detected movement for around 15 minutes, but turn them on again when anyone enters the space. They are more expensive than timers, but are more effective at saving energy in areas where sections of the floor are vacant during the day, or in conjunction with a cleaning regime where, say, all cleaners work on one floor at a time.

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<sup>29</sup> Ref: EECA's technical guide: 'Improving Office Lighting'

(<http://www.eecabusiness.govt.nz/emprove/emprove-library/energy-use/equipment/lighting/guide/technical-guide-improving-office-lighting.pdf>)

# Luminaires (light fittings)

This target and guidance relates to functional luminaires only (ie, those that are to deliver quantified levels of light), not decorative luminaires.

## **TARGET**

### ***Luminaires***

Public Service departments are expected to:

- specify that all reflectors are of the ‘high-efficiency’ type, measured by the Light Output Ratio (LOR)<sup>30</sup>. The minimum LOR figure specified should be appropriate for the type of luminaire category (eg, downlight, floodlight, warehouse highbay, or fluorescent module (office lighting))

## **Guidance**

### ***High-efficiency reflectors***

One of the most common light fittings used in commercial offices is the recessed "troffer" with a prismatic diffuser covering the lamps. Light is lost inside the fitting because of the box shape and, especially as the fitting ages, because the white paint does not reflect light efficiently. Specially shaped reflectors of silver or aluminium can be custom-made and fitted behind the lamps. They improve the efficiency of the fitting by up to 40 per cent and can allow further energy savings as fewer lamps are required. In older offices with poor lighting, light levels can be improved with no extra expenditure of energy.

## **Maintenance of light fittings**

Regular cleaning of light fittings is important to remove any dirt on the reflecting and diffusing surfaces that may cause light levels to drop by over 50 per cent.

Many older installations were designed around the 38mm (T12) fluorescent tube. This tube was much less efficient than the modern 26mm (T8); so much so that towards the end of life, 2 x T8 tubes produce as much light as 3 x T12 tubes. It is also not uncommon to find that the interior surfaces of these fittings have never been cleaned. As most lighting installations are designed for the “worst case”, thorough cleaning of the interior surfaces and diffusers and replacing the tubes with T8 tubes

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<sup>30</sup> Light output ratio is defined in terms of luminaire output and lamp output.

usually allows the fittings to be reduced from 3 tubes to 2. This is a well proven low cost, low risk upgrade option that should be considered before expensive alternatives such as high efficiency reflectors (see below).

In older installations, yellowed diffusers may drastically reduce light levels and should be replaced. Fittings installed in the 1960s and 70s may contain toxic chemicals called PCBs. As it is no longer legal to use equipment containing PCBs, checks of older installations should be performed by an electrical contractor, and PCB containing equipment replaced.

### **Summary – encourage energy-saving behaviour**

Take the following actions to encourage energy-saving behaviour:

- Obtain "Switch Off when not in use" stickers for light switches (available from EECA)
- Use the lowest wattage bulb or tube that will meet lighting requirements
- Remind people to switch off lights in meeting rooms and other rooms that are used only part of the time
- Ensure that switching to individual areas is provided and labelled so that during after-hours use, a whole floor doesn't need to be illuminated.

# Annex 1: Tendering for sustainable procurement

Procuring sustainable goods and services begins with the tender process. Follow this guide when tendering for sustainable procurement:

1. **Consider which products, services or works are the most suitable** on the basis both of their sustainability impact and other factors, such as what is on the market, the technologies available and costs.
2. **Consider economic, environmental and social impacts** through the product lifecycle from waste, energy and emissions to biodiversity, health and working conditions.
3. **End-of-life impacts** should be factored into the procurement planning process. For example, 'special wastes' are categories of wastes that present particular problems and need specific policies for their management. The sound management of these waste streams will usually require the relevant industry to take some responsibility for the goods beyond the point of sale, and to develop or cooperate in schemes that help reduce and better manage the waste involved. The term 'Extended Producer Responsibility' (EPR) is commonly used to describe these schemes. Consider including EPR schemes as a requirement of potential suppliers in specifications and contracts.
4. **Analyse and question demand:** buying less not only saves money but reduces impacts. Determine the number of products to be acquired based on an accurate utilisation analysis.
5. **Collaborative procurement:** where appropriate, use or develop joint procurement arrangements with other departments and agencies.
6. **Take a scientifically-based 'lifecycle costing approach'** for:
  - a. Planning: developing specifications
  - b. Acquisition: defined as the optimum combination of whole life cost and quality (fitness for purpose) to meet the user's requirement
  - c. Operational: in use costs such as consumables, maintenance and support
  - d. Disposal: cost and impact of disposal.

Do not shift impacts from one stage of the lifecycle to another.

7. **Draw up clear and precise functional and technical specifications** using sustainability factors where possible (eg, pass/fail conditions). This is a key stage in the process and offers the most scope for including sustainability

aspects. Make your specifications challenging but achievable for potential suppliers:

- Specify minimum environmental standards (as contained in this document) for features such as energy efficiency, fuel usage reduction and recycled content
  - Look for examples of eco-labelling that could be used
  - Build upon ‘best practices’ of other government departments/organisations by using networking as a way of exchanging information
  - Use performance-based or functional specifications to encourage innovative, sustainable offers
  - Consider sustainable practices such as the use of raw materials, sustainable production methods (economic, social and environmental), energy efficiency, emissions, waste, “recyclability”
  - If unsure about the existence, price or quality of sustainable products or services, ask suppliers to include sustainable variants in their bids.
- 8. Establish selection criteria** that, where appropriate, include sustainability criteria to prove technical capacity to perform the contract. Inform potential suppliers or service providers that they can use environmental management schemes and declarations to demonstrate compliance with the criteria. Be aware, however, that whilst checking for environmental management systems such as ISO14001 is good practice, it doesn’t necessarily guarantee sustainability.
- 9. Establish award criteria.** Insert relevant sustainability criteria either as a benchmark to compare offers with each other (where the technical specifications define the contract as such) or as a way of introducing a sustainability element (where the technical specifications define the object of the contract in a ‘neutral’ way). Use weightings in evaluation criteria and consider lifecycle costings.
- 10. Use contract performance clauses** as a way of setting relevant extra sustainability conditions; for example, where possible insist on environmentally friendly transportation methods (see **Annex 2**). Ensure your contract allows for improvements/innovations to be *considered* for inclusion during the contract term, as technology develops, but in doing this, take care not to materially change the specification of what was originally tendered for.

Always make sure that everything asked of potential bidders and their offers relates to the subject matter of the contract.

NB: Ensure that sustainability contract clauses used are specifically deemed to survive beyond the term of the contract.

- 11. Establish a system of contract monitoring** to ensure suppliers or service providers keep their sustainability promises by continuing to meet the specification(s).

## Annex 2: General sustainability contract clauses – tools and templates

Contract clauses can be used to include environmental considerations at the performance stage (ie, specifying how the contract is to be carried out). The contracting agency can specify the way goods or services are to be supplied and even the method of transport. The supplier is obliged to respect all the performance clauses set out in the contract documents when carrying out the work requested or supplying the products or services covered by the call for tender.

Even though contract clauses are considered to be outside the procedure of the award of contracts, they still need to be set out clearly in the call for tenders. Tenderers should be aware of all the obligations laid down in the contract and be able to reflect this in the price of their bids.

Contract clauses should be linked to performance of the contract and may not result in discrimination in favour of one particular supplier over another.

### ***Example – Department for Environment Food and Rural Affairs (Defra), UK***

#### ***In my building you follow my environmental policy!***

Defra's guidelines on green procurement specify that all contractors working on their site must follow the environmental policy of the department. This includes rules on smoking, putting waste into the appropriate bins, complying with parking restrictions and generally following the rules on environmental protection that apply to staff. (Taken from *Buying Green – A handbook on environmental public procurement*, published by the European Commission. See <http://ec.europa.eu/environment/gpp/pdf/gpphandbook.pdf>)

### **Examples of areas that may be considered for inclusion in specifications for contracts for the provision of works or services**

#### ***Delivery and transport of products and tools to the site:***

- Have the product delivered in the **appropriate quantity**. In general terms this means a bulk delivery, as this will be more environmentally efficient in terms of transport impact per item than having smaller quantities delivered more often; specifying a maximum number of deliveries per week or month is another way of achieving the same result. Specify that suppliers seek to reduce the number and frequency of individual deliveries to premises and

require drivers to switch their engines off when vehicles are stationary so as to keep fuel usage and emissions to a minimum

- Require that goods be **delivered outside peak traffic times** to minimise the contribution of deliveries to traffic congestion.

***Disposal of used products or packaging from products:***

- Require that the supplier **takes back (and recycles or reuses) any packaging** that comes with the product (this has the double advantage of centralising packaging prior to reuse or recycling and encouraging the supplier to cut down on any unnecessary packaging).

***How the service is performed:***

- Use measurement indicators to ensure that appropriate quantities of a product are being used to perform a service (eg, cleaning products for a domestic services contract).

***Training of supplier staff:***

- Train staff in the environmental impact of their work and the environmental/sustainable policy of the agency in/on whose premises they will be working.

**Example clauses for general ‘boiler plate’ Purchase of Goods or Supply of Services contracts**

- The Supplier shall comply in all material respects with applicable environmental laws and regulations in force from time to time in relation to the provision of [Services]. Where the provisions of any such legislation are implemented by the use of voluntary agreements or codes of practice, the Supplier shall comply with such agreements or codes of practices as if they were incorporated into New Zealand law subject to those voluntary agreements being cited in tender documentation.
- Without prejudice to the generality of the foregoing, the Supplier shall:
  - I. comply with all reasonable stipulations of the Customer aimed at minimising packaging in which any products supplied by the Supplier to the Customer, as part of the performance, of the Services are supplied;
  - II. promptly provide such data as may reasonably be requested by the Customer from time to time regarding the weight and type of packaging according to material type used in relation to all products supplied to the Customer under or pursuant to the Contract;
  - III. comply with all obligations imposed on it in relation to any products supplied to the Customer as part of the performance of the Services by the New

Zealand Packaging Accord (or subsequent guidance, directives or legislation);

- IV. label all products supplied to the Customer by the Supplier under the Contract and the packaging of those products, to highlight environmental and safety information as required by applicable NZ legislation;
- V. unless otherwise agreed with the Customer, insofar as any products supplied under the Contract comprise or include electrical or electronic equipment, manage the said equipment and associated consumables at end of life to facilitate recovery, treatment, recycling and provide any information which the Customer may reasonably require from time to time regarding the costs of such activity;
- VI. promptly provide all such information regarding the environmental impact of any products supplied or used under the Contract as may reasonably be required by the Customer to permit informed choices by end users;
- VII. where goods are imported to NZ then for the purposes of the New Zealand Packaging Accord (or subsequent guidance, directives or legislation) the Supplier shall assume the rolled-up obligations for all activities performed outside New Zealand in relation to the goods and the packaging which is used for the containment, protection, handling, delivery and presentation of the goods in addition to any other obligations the Supplier may have pursuant to the said regulations.
- VIII. The Supplier shall meet all reasonable requests by the Customer for information evidencing the Supplier's compliance with the provisions of this Clause.

## **Examples of specific sustainable contract clauses used by New Zealand departments**

### ***Agency example 1***

#### ***Design – sustainable development***

The [Agency/Department Name]'s goal is for the design to incorporate best international design practice to reduce environmental impact with regard to sustainability, avoidance of environmental pollution, lifecycle energy use, water, wastewater management and solid waste management.

This is to be achieved by addressing the following objectives:

- selection of materials and systems that principally minimise their operational impact on the environment, while coming from sustainable

resources, have minimum production environmental effects and avoid environmental disposal implications

- by meeting the [Agency/Department Name's Energy Services Performance Brief] without compromising the [Agency/Department Name Facilities Standards]
- by employing current and proven cost-effective technology and design techniques
- by adopting best practice procedures and addressing whole of lifecycle cost.

### **Agency example 2**

- I. The [Agency/Department Name] is committed to purchasing sustainable products, works and services wherever possible. The [Agency/Department Name] will give appropriate weighting to sustainable products, works and services in the purchasing process.
- II. The Supplier will perform the services in a manner that gives appropriate regard to the protection of the natural environment. The Supplier will comply with all environmentally related legislation and codes of practices relating to the products and services being offered.
- III. The Supplier will ensure any opportunities for improvement in [Agency/Department Name]'s environmental performance, identified by the Supplier's employees or subcontractors are reported to the relevant [Agency/Department Name] Govt<sup>3</sup> contact person.
- IV. Tenderers are to provide details of any eco-label licence (see [www.enviro-choice.org.nz](http://www.enviro-choice.org.nz)) or similar initiatives.
- V. Tenders will include details of energy ratings (see [www.eeca.govt.nz](http://www.eeca.govt.nz)) for appliances.
- VI. The Supplier shall provide the minimum appropriate level of packaging for the supplied items, consistent with ensuring an adequate level of protection during the storage and delivery phases of those items.
- VII. As far as is practicable, it is the intention of the [Agency/Department Name] to ensure that the packaging is returned to the Supplier at regular intervals for recycling and reuse.
- VIII. The Supplier shall make due allowance in their Tender for the design and costing of packaging for an appropriate level of recycling and reuse and shall submit details of their packaging proposals with their Tender.

IX. The Supplier shall provide products and services with appropriate considerations to: reduced levels of toxicity, end of life disposal, shipping efficiencies and reducing environmental impact during research services.

# Glossary

ANCAP	Australian New Car Assessment Programme
CFC	Chlorofluorocarbon
CFL	Compact fluorescent lamp
CNPS	Carbon Neutral Public Service
CPET	Central Point of Expertise for Timber Procurement
DEFRA	UK's Department for Environment Food and Rural Affairs
EECA	Energy Efficiency and Conservation Authority
EMS	Environmental Management System
EPR	Extended Producer Responsibility
FSC	Forest Stewardship Council
g/gm	gram
Govt <sup>3</sup>	An initiative led by the Ministry for the Environment's Sustainable Business Group, that helps central government agencies become more sustainable
GPDG	Government Procurement Development Group, part of the Ministry of Economic Development
HC	Hydrocarbon
HC+NOx	Hydrocarbon + Nitrogen oxide
HCFC	Hydrochlorofluorocarbon
ISO 14000	A series of standards that are part of international environmental management guidelines
km	kilometre
MAF	Ministry for Agriculture and Forestry
MED	Ministry of Economic Development
MEPS	Minimum energy performance standards
MfE	Ministry for the Environment
mg	milligram

MoT	Ministry of Transport
NOx	Nitrogen oxide
PET	Polyethylene terephthalate
PM	Particulate matter
ppm	Parts per million
PVC	Polyvinyl chloride
REBRI	Resource Efficiency in the Building and Related Industries
SLA	Service level agreement
TWPP	Timber and Wood Products Procurement Policy
VOC	Volatile organic compound
WWF	World Wildlife Fund

## **Document Revision Control**

<b>Version date (pre- amendment)</b>	<b>Version date (post- amendment)</b>	<b>Author/Editor</b>	<b>Reason for amendment</b>	<b>Date amended</b>
August 2007	August 2008	Vivienne Morley	Motor vehicles category – Revision of Mandatory Standard for vehicle safety.	6 Aug 08