

**House of Representatives
Standing Committee on
Environment and Heritage**

Inquiry into Sustainable Cities 2025

Submission by the
**Australian Conservation Foundation
and Environment Victoria**

December 2003

Executive Summary

ACF has a vision of a 5 Star Green City, which:

- Produces zero net greenhouse pollution;
- Recycles and reuses water;
- Creates zero waste;
- Has an integrated transport system; and
- Protects its natural and cultural heritage.

A 5 Star Green City would provide incentives for people to use public transport, walk and cycle and would help families wanting to install solar power and rainwater tanks. It would provide mandatory energy and water efficiency standards for commercial and domestic buildings. It would protect and enhance urban bushland and open space. Finally, it would provide assistance to low income earners to help them do the right thing by the environment while keeping their costs down.

This submission outlines in detail ACF's vision of a 5 Star Green City.

Key Recommendations

ACF believes the Federal Government should develop a 5 Star Green Cities Program, and should endorse the following key recommendations:

1. That the Federal Government set a national greenhouse pollution reduction target of 70-80% of 1990 levels by 2050 and a mandatory renewable energy target of 10% by 2010 and 20% by 2020.
2. That the Federal Government ratify the Kyoto Protocol on climate change and commit to a 50% reduction in energy use by 2025, backed by a revenue neutral carbon tax or domestic greenhouse emissions trading scheme.
3. That the Federal Government support the reduction of greenhouse pollution produced within our ten largest municipalities by 30% of 1990 levels by 2025.
4. That the Federal Government endorse and implement the recommendations of the Senate Inquiry into Urban Water Management.
5. That the Federal Government obtain COAG's commitment to a national waste reduction strategy, including a target of Zero Waste in our capital cities by 2020.
6. That the Federal Government either remove Fringe Benefit Tax advantages for company car use and parking or provide equivalent advantages for public transport fares and bicycles.
7. That mandatory 5 star energy and water efficiency requirements be introduced for all new residential and commercial buildings.

8. That a National Sustainability Council be established, reporting to COAG, with powers akin to the National Competition Council.

Introduction

Australia's attachment to "the bush" is part of our national mythology, our vision of who we are as Australians. We like to identify with the bush and with the men and women who have been part of it. In reality, however, over the past century we have become city dwellers.

Our day to day experiences are not so much of sweeping plains and ragged mountain ranges, but of congested roads, urban sprawl, air pollution and contaminated land and waterways.

Australia is highly urbanised with eighty-seven per cent of Australians - more than 17 million people - living in cities and their suburbs. We benefit greatly from the economic, educational and cultural opportunities available in our cities and we are fortunate to enjoy some of the most livable cities in the world.

Unfortunately, the way we currently use resources in our cities is not contributing to our cities' long-term livability. The way we use energy, water and other natural resources in our buildings, infrastructure and lifestyles is inefficient and not sustainable. This is partly because of the way we have designed our cities.

Our cities are "*hot, heavy and wet*". They use a lot of energy and water, and produce a lot of waste, to create wealth. Australia is among the least energy efficient countries in the OECD, the second highest per capita producer of municipal waste and a high consumer of water in urban areas.

The 2003 NSW State of the Environment Report states that it now takes 7.4 hectares of land to maintain each Sydneysider's lifestyle, an increase of 16% on five years ago. Furthermore, New South Wales' ecological impact, or "footprint", has increased by 23% in five years while the population grew by only 7%.

Our cities are inefficient in their use of energy and water, and production of waste, at every level: residential, commercial and industrial. The challenge is to make our cities "cool, light and dry". That's the vision of a sustainable city, and that is why the Australian Conservation Foundation is calling for a national sustainable cities agenda, a 5 Star Green Cities Program.

ACF welcomes the House of Representatives Standing Committee on Environment and Heritage Inquiry into Sustainable Cities 2025, and believes that it provides the opportunity to outline a comprehensive vision for the future of our cities.

ACF is an independent, not-for-profit organisation with over 60 000 members and supporters. While many people associate ACF's work with the protection of Australia's flora and fauna, the ACF also acts to protect the environment and enhance the quality of life we enjoy in our cities. It should be noted that ACF's Sydney Branch has also put in a submission to this inquiry. Their submission makes important comments about the need to protect and enhance the environment within and beyond city borders and to avoid transferring the problem elsewhere.

The concept of sustainability used in this submission is outlined in more detail in ACF's comprehensive policy document *Natural Advantage: A Blueprint for a*

Sustainable Australia. This outlines the vision, principles, policies and practical examples that are required to drive sustainability, including radical resource productivity, biomimicry, service and flow economy and investing in natural capital. *Natural Advantage* also embodies the need to live within our ecological limits.

ACF's broader policy priorities are outlined in *A National Agenda for a Sustainable Australia: 5 Tests for Policy Performance*, which was launched by ACF President, Peter Garrett, at the National Press Club in June 2003. This document can be found at our website www.acfonline.org.au

Sustainable Cities 2025: A Blueprint for the Future

The Standing Committee's discussion paper provides an excellent summary of the key challenges in moving towards sustainable cities. ACF supports the visionary objectives for the Australian sustainable city outlined in the report:

1. Preserve bushland, significant heritage and urban green zones;
2. Ensure equitable access to and efficient use of energy, including renewable energy sources;
3. Establish an integrated sustainable water and stormwater management system addressing capture, consumption, treatment and re-use opportunities;
4. Manage and minimise domestic and industrial waste;
5. Develop sustainable transport networks, nodal complementarity and logistics;
6. Incorporate eco-efficiency principles into new buildings and housing; and
7. Provide urban plans that accommodate lifestyle and business opportunities.

In addition to supporting these broad based objectives, the following areas should also be considered:

1. Recognition of the direct relationship between the economy and our environment as a guiding point for achieving sustainability.
2. Ensuring that all Government policy that has an impact on cities supports the development of sustainable cities by 2025.
3. Help to build sustainable technologies, infrastructure and industries by removing disincentives for sustainable industries and subsidies to unsustainable industries.
4. Support local communities developing neighbourhood solutions to sustainable cities.
5. Ensure education programs are developed to support sustainable cities programs.

Driving Sustainability

ACF strongly believes that sustainability reform must be driven from the top, with leadership and coordination on sustainability coming from the Prime Minister and the Prime Minister's Department. We believe a new agreement is required between the leaders of all Australian Governments to drive sustainability reform and address greenhouse pollution, land and water problems, the sustainability of our cities and the loss of our plant and animal species.

Competition and regulation of anti-competitive business behaviour have been key drivers for economic and social reform in the late 20th century. Sustainability reform should be seen as a key driver of environmental, social, and economic reform at the start of the 21st century. One of the best ways to achieve this would be to create a similar body to the National Competition Council to commit governments to, and to monitor implementation of, sustainability reform.

Recommendations

- That the Standing Committee call for a Heads of Government commitment to a National Sustainability Policy.
- That the Standing Committee recommend the establishment of a National Sustainability Council reporting to COAG, with powers akin to the National Competition Council, with associated funding.

1. Preserve bushland, significant heritage and urban green zones.

In the fast-paced modern world of our cities, there is an ongoing push for change. But growth and development must be balanced and reconciled with the need to preserve our biodiversity, our recreational areas and our heritage. We need to balance our economic, social, health and environmental needs in a sustainable city.

In preserving our heritage – and deciding what places and values we want to preserve – we need to ensure that we can still reform our cities to maximise their environmental efficiency. We should engage in adaptive re-use, ensuring that we have the most energy and water efficient technologies in our oldest, most significant buildings.

Sustainable design has the potential to be sensitive to these values and there is a huge opportunity for a constructive dialogue between heritage and sustainability in our cities. The 60L Green Building in Melbourne, highlighted in the discussion paper, is a good example of a constructive dialogue between heritage and sustainability values as the 1870s structure has become an iconic green building development.

State and Territory, and local governments, have an important role to play in ensuring a constructive dialogue between the heritage values of traditional urban character and the sustainability values that will lead to sustainable cities.

The Federal Government's new national heritage list should recognise the critical importance of the preservation of bushlands and heritage to our national identity through the listing of appropriate urban heritage buildings and precincts and significant urban bushland areas. Although ACF does not yet have a formal view on which urban places or themes should be included in the National Heritage List, examples could include the Rocks in Sydney, Kings Park in Perth, the Adelaide Parklands, the Melbourne Exhibition Building, and the Carlton and Fitzroy Parks in Melbourne. Such listings should ensure greater protection for these places and the values associated with those places.

Recommendations:

- That the National Heritage List include thematic listings of significant urban heritage buildings, heritage precincts and urban bush and parklands.
- That the Standing Committee provide advice on mechanisms for dialogue on heritage and sustainability issues.

2. Ensure equitable access to and efficient use of energy, including renewable energy sources.

Per capita, Australia is the highest emitter of greenhouse gas pollution of any nation in the OECD. Australia's profligate use of fossil fuel energy led the Australian government to plead a special case in international negotiations on the Kyoto Protocol of the United Nations Framework Convention on Climate Change. While the relative success of these pleadings has bought Australia some time through a generous emissions target and special concessions, Australia's emissions are continuing to rise.

In the post-Kyoto period, post 2013, Australia is likely to be particularly hard hit economically by the tougher measures needed to achieve the 70-80% reduction in greenhouse gas emissions by 2050 required to stabilise the global climate. At the same time, we are likely to suffer more than any other developed country the health, social and environmental consequences of climate change.¹ It makes sense for us to begin the critical work of dramatically reducing our greenhouse gas emissions now rather than leaving the economic and environmental pain to our children and grandchildren.

Australia may be on track to meet its generous Kyoto target of 108% of 1990 levels by 2010, due to land-use factors, but there still does not appear to be a long-term strategy for significantly reducing Australia's greenhouse pollution.

We need to transform our cities so that they produce zero net greenhouse pollution. This means that city infrastructure and the buildings in which we live and work, need to be energy efficient, the energy we use needs to be renewable, and any remaining greenhouse pollution should be offset through tree planting programs. The City of Melbourne should be commended for already setting a target of zero net emissions across the municipality by 2020.²

ACF proposes that the Federal Government set firm targets for Australia's major cities to achieve zero net greenhouse pollution. The Government should continue to fund programs that support local government in reducing greenhouse pollution such as the Cities for Climate Protection Program and the Cool Communities Program.

Energy Efficiency

The largest source of greenhouse gas emissions in Australia is electricity generation, of which 80% is produced by coal-fired power stations. Coal and in particular brown coal is a significantly fossil fuel intensive way of producing electricity. The residential consumption of electricity accounts for around 27% of total electricity consumption, which has rapidly increased by nearly 80% from 1980 – 2000.³ These trends point to massive projected increases in greenhouse gas pollution from electricity use in the residential sector. At the same time Australia has amongst the lowest residential electricity prices in the world, therefore there is little incentive to reduce electricity consumption.

¹ Karoly D., Risbey J. and Reynolds A. (2003) Global warming contributes to Australia's worst drought World Wide Fund for Nature: Sydney

² City of Melbourne (2003) Zero Net Emissions by 2020: A roadmap to a climate neutral city

³ Electricity Supply Association of Australia; Australian Electricity Supply Development 2000-2002, September 2002.

The Electricity Supply Association of Australia has recently reported that demand for electricity in New South Wales, Victoria and Queensland is set to outpace supply and is recommending that major investment will be needed in costly and unsustainable energy infrastructure. However this investment is completely unnecessary.

Instead we should be focusing on energy efficiency opportunities. Using energy more efficiently is by far the most cost effective means of reducing greenhouse emissions. Not only will it lead to energy savings, it will contribute to Australia's economic growth and employment prospects.

A national study conducted by the Sustainable Energy Authority of Victoria and the Allen Consulting Group has reported that implementing just 50% of the currently commercially available energy efficiency measures over the next 12 years would create an extra 9000 jobs and increase GDP by \$1.8 billion⁴. The largest savings in energy efficiency, estimated to be in the residential sector, could see Australian energy consumption reduce by between 20-48% at no net cost.⁵

Renewable Energy

Investment in major works for energy infrastructure should be directed to clean renewable energy rather than greenhouse polluting fossil fuels. It is crucial that demand side greenhouse abatement measures are complemented by leadership in sustainable energy supply.

New South Wales, Victoria and Queensland are expected to account for some \$10 billion worth of new investment in generation capacity, high voltage transmission lines and lower voltage systems in the next five years, with 60 percent of the capital outlays going on upgrading urban distribution systems.⁶

Nationally we should be aiming for a renewable energy (excluding large scale hydropower) target of 10% by 2010 and 20% by 2020. ACF welcomes the recommendation of the House of Representatives Environment Committee, in its Green Jobs Inquiry, that there should be a "substantial increase" in the Mandatory Renewable Energy Target (MRET).⁷ We believe that the target of 10% by 2010 and 20% by 2010 is an achievable and necessary target.

Neighbourhood, or precinct approaches to renewable energy generation has benefits of community ownership of greenhouse abatement solutions while at the same time pooling resources. By encouraging buildings to be net generators of renewable energy significant savings can be made on 'pole and line' infrastructure. High profile demonstration projects such as the solar panels on the Queen Victoria Market in Melbourne can increase the awareness and acceptance of such approaches.

Government Procurement

In addition to investment in sustainable energy infrastructure, Government has a crucial role in sending market signals through electricity pricing and government procurement to encourage sustainable industries.

⁴ Young, D. (2003) Towards a National Framework for Energy Efficiency Presentation to the 2003 conference of the Business Council for Sustainable Energy.

⁵ Hamilton, C (2001) Running from the Storm, UNSW Press, Sydney

⁶ Electricity Supply Association of Australia; Electricity Australia 2003.

⁷ House of Representative Standing Committee on Environment and Heritage, (2003), Inquiry into Employment in the Environment Sector, Canberra.

The Australian Greenhouse Office reports that greenhouse pollution from commercial office buildings is set to double 1990 levels by 2010. Governments at all levels already apply procurement and purchasing policies, which give preference to local products. The Federal Government has developed a draft environmental purchasing policy which has been adopted by a handful of government agencies and used as a model by several States.

The Federal Government developed National Australian Built Environment Rating System (NABERS) should be used to set procurement criteria for existing buildings including, at a minimum, a commitment to 5-star ABGRS energy efficiency for all new and existing office space.

ACF proposes a whole of Government commitment to environmental purchasing including the purchase and leasing of all Government office space.

Electricity Pricing

Australian residential electricity prices are amongst the lowest in the OECD. Traditionally this has been explained by the abundance of fossil fuel deposits such as coal. However these prices do not take into account the additional environmental and health costs of relying on greenhouse polluting energy. The environmental costs of climate change are already starting to affect every sector of the Australian economy. Therefore, pricing needs to reflect the true costs of greenhouse pollution balanced with the need to provide energy services for lighting, heating and cooking.

Consumers should receive information about their greenhouse footprint through labelling on all electricity bills and advice on how to reduce their greenhouse impact.

There should also be a greenhouse abatement initiative that enables consumers to pay for trees to be planted for a slightly lower cost than the excess electricity charges.

Mandatory disclosure of energy rating

The environmental impact from existing housing stock is much more significant than that of new homes in terms of water consumption and greenhouse pollution. In addition, many of the benefits of energy efficiency requirements for new buildings including lower energy bills and improved comfort do not flow through to the rental market.

For some time the ACT Government has required disclosure of energy efficiency ratings whenever a house is sold.

It should be mandatory for landlords of commercial and residential buildings to get their rental properties audited for energy efficiency. Disclosure should be mandatory as a condition of all new tenancy contracts so that tenants can make informed decisions about the energy efficiency of the buildings they occupy. Similar measures should be also implemented for the point of sale.

Greenhouse Abatement

Residents should be empowered to take action to lessen the impact of the greenhouse gas pollution they have created. Residents should be provided with the option of abating their greenhouse gas emissions by paying for trees to be planted at a similar cost to the excess energy charges from the differentiated pricing strategy.

This would enable people to see their money go to positive measures such as tree planting if they are to pay higher prices for excess electricity. This approach has been tested with tree planting greenhouse abatement for motor vehicle fleets.

Similarly, residents should be encouraged to reduce their greenhouse gas pollution through a retrofitting scheme to improve the energy efficiency of existing homes and assist residents in avoiding charges from excess energy use.

Mandatory energy efficiency requirements should extend to major renovations and complemented with rebates and incentives for retrofitting homes for improved energy efficiency.

Community Programs

The community element in greenhouse abatement should not be ignored. There are a number of community initiatives such as *Cool Communities*, *Sustainability Street*, *The Sustainable Schools Program*, as well as local government programs that raise awareness and support behavioural change towards sustainable living. The Cool Communities Program, which fills a niche not met by any other Federal Government program, should continue to be funded by the Federal Government.

Recommendations:

- That the Federal Government set a national greenhouse pollution reduction target of 70-80% of 1990 levels by 2050.
- That the Federal Government seek to reduce greenhouse pollution produced within our ten largest municipalities by 30% by 2025.
- That the Federal Government ratify the Kyoto Protocol on climate change and commit to a 50% reduction in energy use by 2025, backed by a revenue neutral carbon tax or domestic greenhouse emissions trading scheme.
- That investment in major works for energy infrastructure should be directed to clean renewable energy rather than greenhouse polluting fossil fuels.
- That the Standing Committee endorse a national renewable energy target of 10% by 2010 and 20% by 2020.
- That the Standing Committee endorse a differentiated domestic energy pricing strategy to provide a disincentive for electricity demand above average needs.
- That there be mandatory disclosure of the energy efficiency and greenhouse performance of residences on energy bills and at point of sale and point of lease.
- The Cool Communities Program should continue to be funded by the Federal Government.
- That the draft Federal Government environmental purchasing policy be tightened to include a firm commitment to leasing office space and acquiring government property according to environmental building criteria.

- That the new Federal Government developed 'National Australian Built Environment Rating System' (NABERS) be used to set improved performance targets in existing government buildings in each category of energy, water and waste.

3. Establish an integrated sustainable water and stormwater management system addressing capture, consumption, treatment and re-use opportunities.

ACF supports the recommendations of the 2002 Senate Environment, Communications, Information Technology and the Arts Committee Inquiry into Urban Water Management, and urges the current inquiry to also endorse those recommendations.

The Senate Inquiry called on the Federal Government to play a more prominent role in driving the changes needed to use water more sustainably, and called for a National Water Policy. While ACF welcomed the National Water Initiative, endorsed by COAG at its August 2003 meeting, as an important first step in restoring our most significant river systems, it should be noted that the National Water Initiative failed to give appropriate attention to urban water use. This should be examined in greater detail at the next COAG meeting in early 2004.

The Senate Inquiry argued that central to a National Water policy was a National Water Partnership Framework between all levels of government, research institutions, catchment management authorities and the general public. This view should be reinforced by the current inquiry.

The Senate Inquiry also called for better pricing of water and national targets for the more efficient use of water. ACF supports these recommendations. In addition, ACF believes that the Australian Building Code should be extended to address water efficiency and water reuse in the building sector and that there should be mandatory reduction targets for water consumption for all residential and commercial buildings complemented with support for a retrofitting strategy.

Australian Building Code

One of the barriers to the uptake of water efficient plumbing and water reuse is that water infrastructure is often fixed at the building development stage. If water efficiency including water reuse are not part of standard building practice, including the design and contracting of plumbing services, it must be retrofitted – which is more expensive.

While most states have a separate plumbing code, it is crucial that both the building and plumbing codes complement the overarching sustainability objectives when it comes to water.

Several states including Victoria and New South Wales have already taken measures to ensure that water efficiency was introduced at the same time as changes to building regulations. The 60L Green Building in Melbourne is designed to reduce the demand for mains water by some 90% over standard commercial buildings using off the shelf technology.

ACF proposes mandatory reduction targets for water consumption for all residential and commercial buildings complemented with support for a retrofitting strategy.

Recommendations

- That the Standing Committee endorse the recommendations of the 2002 Senate Environment, Communications, Information Technology and the Arts Committee Inquiry into Urban Water Management, and in particular urges the Federal Government to play a more prominent role in driving the changes needed to manage urban water more sustainably.
- That there be mandatory reduction targets for water consumption for all residential and commercial buildings complemented with support for a retrofitting strategy

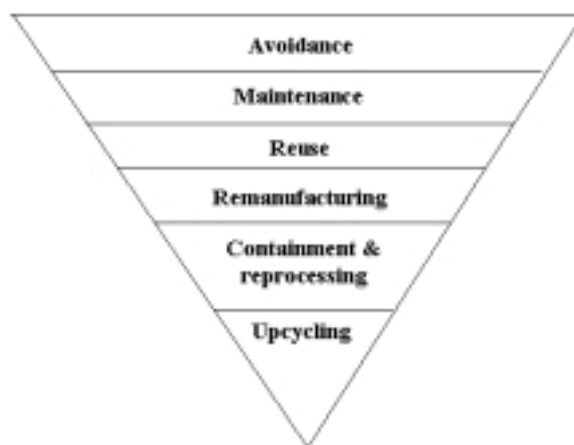
4. Manage and minimise domestic and industrial waste⁸

To achieve sustainable urban communities, Australia needs to focus on sustainable consumption, which means greatly increasing our resource efficiency and avoiding the creation of waste.

Australia should seek to achieve a zero waste vision for our cities within the next 20 years. This can be achieved through:

- *a Factor X improvement in efficiency* (where the X is set at the level necessary to achieve ecological sustainability) and it is anticipated that it will involve efficiency improvement exceeding Factor 10 within the next 30 years.
- *a closed-cycle or zero waste economy* - that is, that extractions from and returns to the natural environment are reduced to levels that will allow the achievement of ecological sustainability and that consequently a closed-loop economy for materials is adopted with the bulk of materials (even nature compatible materials) recycled within the economy rather than through the natural environment.

For this reason we would recommend that the waste hierarchy be recast as a materials management hierarchy as outlined on the following page:



⁸ This section has been developed in conjunction with Environment Victoria.

To embrace the vision of a zero-waste culture there are a number of principles that should be adopted as practice:

Extended Producer Responsibility

Industry should take responsibility for the waste it creates - massive amounts of waste is created by the processes through which Australian businesses make profit. This profit is being subsidised by the community and the government through the burying of scarce resources in landfill and the negative environmental impacts of waste gas emissions, liquids and toxic materials.

Producer responsibility schemes need to be in place for all end-of-life products to ensure that the producer and the consumer share the responsibility for recovery of materials and to encourage resource efficiency and the avoidance of waste in the production process.

Extended Producer Responsibility is a system in which the responsibility for the cost of all aspects of a product's life, including extraction and use of raw materials, waste from processing and disposal at end of life, is borne by the producer (and inevitably passed on to the purchaser). This reduces the cost of disposal of waste, which has traditionally been borne by ratepayers, governments and society through garbage collection, recycling schemes, litter collection, illegal dumping and landfill management.

By ensuring that the producer and user of the product bear the cost of its disposal, this shifts these costs away from local government and instead towards those who are benefiting or profiting from this consumption. This is likely to encourage more responsible packaging and disposal options for products.

Mandatory Scheme for Reducing Waste

The National Packaging Covenant is currently under review. Unfortunately, this voluntary scheme for reducing packaging waste has not produced sufficient gains in product stewardship and resource efficiency and it reinforces primary responsibility for waste at the local government level.

In order to embrace a zero waste culture, the Covenant should be applied to all manufacturers and importers to create a level of playing field. Furthermore, its coverage should also be broadened to incorporate materials efficiency (that is, reducing usage and increasing the recyclability of products) so that producers are encouraged to be innovative through greater parts of the production chain.

Given the horrendous impact plastic bags have on our environment, the Covenant should mandate targets and goals for plastic bag usage.

Zero Waste Management

The principle of zero waste management aims to encourage waste minimization, high rates of recycling, continuous improvement in the performance of source separation systems and environmentally friendly methods of dealing with residual waste. One of the key principles is that materials that cannot be reused or recycled should be phased out.

The purpose of most residual waste treatment processes is to reduce the volume of material for final disposal and to stabilize the waste such that the potential for gas formation or pollutant carriage through leachate is minimized.

To date, landfill has been the most popular form of residual waste management in Australia. This residual waste has included all organic household and garden material, which is currently treated as a dead resource, that is, it goes into landfill as garbage. This organic material has also contributed to the putrefaction of waste resulting in ground water pollution.

Therefore, given the problems of space and ground water pollution, Australia should aim to phase out the use of landfill over the next 30 years by focusing on waste avoidance and recovery and recycling.

The most state of the art environmentally benign treatment of residual waste is Mechanical-Biological Treatment. The mechanical part of the process is to optimise the materials for subsequent processing as well as to support biological composting. Thermal treatment such as incineration, gasification and pyrolysis (including waste to energy plants) all produce residues that create dioxins and other pollutants and should not be supported.

Levies on Construction and Demolition Waste

Construction and demolition waste accounts for about 40% of all material going to landfill in Australia. Yet the 60L Green Building in Melbourne has demonstrated that it is possible to reuse and recycle many building materials in a standard commercial building project. The Green Building Partnership, developers of the 60L Green Building, ensured that all concrete used contained 60% recycled aggregate and all the bricks from the original structure were reused.

In many European countries and in Japan, the levies on demolition and construction waste are significantly higher and in some cases this waste is banned from landfill. This has led to the emergence of a number of new industries in material recycling.

ACF believes that landfill levies for demolition and construction waste should be increased and that this waste should be entirely diverted from landfill.

Development of a Closed Cycle Economy

There are a number of mechanisms the government can use to support the creation of a closed cycle economy in which it is more profitable for businesses to reuse and recycle materials.

The Program for Research and Documentation for a Sustainable Society (ProSus) in Norway has developed a policy aimed at eliminating materials that are non-biodegradable, non-reusable or non-recyclable. Australia should follow this lead.

- Definition and labelling of materials that are non-biodegradable, non-reusable and non-recyclable
- Research and development into alternative materials and products that eliminate the need for these non-reusable materials
- Program of staged targets for removal of these materials from the market
- A government levy to be placed on the use of non-recyclable/non-reusable products, which would discourage use of such materials. Producers are likely to

pass on the levy to the consumer, for example by charging for plastic bags in shops.

Fiscal Measures

Structures such as taxes, policy frameworks and roles of different jurisdictions should be reassessed to have a positive influence on the development of ecologically sustainable practices and a closed cycle, resource efficient economy.

(a) Introduce landfill-related incentives to discourage waste production.

The landfill levy in all States is inadequate to discourage the disposal of materials to landfill rather than ensuring their recovery. Landfill charges should be significantly increased at a national level to reflect the impact that excessive waste is having on the environment.

(b) Removal of tax-payer funded subsidies for the use of raw materials.

In 1996 the Commonwealth Department of Environment Sport and Territories released *Subsidies to the Use of Natural Resources*, a report that reviewed both financial and environmental subsidies to a range of industry sectors. Sectors studied included energy production, water and wastewater, solid waste disposal, forestry in native forests, agricultural chemicals and fisheries. The report concluded that government financial subsidies to these sectors totalled “at least \$5.7 billion in 1993-94, equal to 4.4 per cent of total revenues of Australian governments”.

With the removal of government subsidies for the use of raw materials, producers would be forced to incorporate the full cost of extraction and subsequent disposal of these materials into the price of the product, thereby discouraging over-consumption of both the raw materials and the end-products.

Recommendations:

- That the Federal Government obtain COAG’s commitment to a national waste reduction strategy, including a target of Zero Waste in our capital cities by 2020.
- The Federal Government should:
 - Identify environmentally damaging government programs and subsidies through an Environmental Subsidies and Green Tax Inquiry
 - Focus any subsidies or tax incentives towards using reusable, recyclable and reprocessible materials rather than non-renewable raw materials
- Legislation and regulation is needed to ensure that manufacturers and importers pay for the cost of recycling (or currently landfilling) the waste associated with their products. These charges would then be passed on to the consumer in the price of the goods.
- Charges for non-recyclable materials should be higher than for recyclables (and different materials could be charged different rates according to toxicity or the complexity of recycling).
- A government-regulated scheme is required to provide a price-disadvantage for non-recyclable materials including:

- *Deposit-refund schemes*, such as on tyres, batteries, automobiles and computers, to encourage return of the product to the producer for recycling. Container deposit systems currently operate in South Australia for recyclable containers
 - *Advance disposal fees*, that is, a fee to be paid by producers into a government fund to cover the cost of disposal of a product, for example the industry-proposed take-back scheme for televisions.
 - *Levies* to discourage unnecessary use of non-recyclable materials or packaging, for example a charge on plastic bags in shops
- That the National Packaging Covenant mandates specific targets and goals for reduction of packaging eg reduction in plastic bag usage by 90%.
 - That the National Packaging Covenant be applied to all manufacturers and importers of products and set a level playing field by requiring the same materials efficiency and recycling standards from all participants.
 - That the National Packaging Covenant be broadened beyond packaging to include a “Materials Efficiency Covenant” which require producers to reduce resource intensity and increase the recyclability of the total materials used, not just packaging.

Landfill Bans

- Recyclable or highly toxic items can be immediately banned from landfill, for example, in Nova Scotia, Canada, they have banned green waste, cardboard, beverage containers, tin cans, newsprint, HDPE and glass as there are obvious recycling alternatives for these materials.
- Toxic items such as batteries, fluoro lightglobes etc should be banned. There are already markets for some of these items.

Landfill levies and charging for residual waste

- The landfill levies in all States are too low to act as a disincentive for landfilling and therefore encourage markets for recycling and reuse. Charges for sending material to landfill should be increased nationally.
- A system whereby households pay by weight for rubbish collection could be introduced nationally at the local government level. This could include lower or no charges for recycled materials.
- A pay by weight scheme for industrial waste could also be implemented

5. Develop sustainable transport networks, nodal complementarity and logistics

The Federal Government needs to take an active role in urban transport if sustainable, livable cities are to be achieved. Sustainable transport systems are the key to sustainable cities, and they have the capacity to bring together the social, economic, health and environmental needs of our communities.

Urban transport policy has traditionally been the concern of State or Local Government, but Federal Government decisions, including road funding, have profound impacts on cities. There is no constitutional impediment to Federal Government involvement. The Federal Government could and should get involved in supporting sustainable solutions to car dependence. Urban transport is an area of national significance and increasingly so with greenhouse gas emissions from the transport sector increasing by 20.3% from 1990 levels - 90% of this increase has been attributed to road transport.

Almost half of all vehicle trips taken in Australian are distances of less than 5km. That such short journeys are being taken by cars reflects our poor urban design that discourages cycling and walking. Sustainable urban planning must guide sustainable transport planning. Australian cities need to be transformed from the sprawling, polluted and alienating cities that they are becoming.

New settlement areas should be designed as transit cities or urban villages centered around public transport. The urban villages should contain intensified developments with concentrations of shops, medium rise offices, educational institutions and entertainment. Car free pedestrian zones and bike-ways will encourage walking and bikes as the primary transport modes around the centres. On the roads that are accessible to cars there should be substantial traffic calming.

The urban villages should be connected to major centres by frequent rail services that run day and night, and trams, buses, minibuses and cycle ways and footpaths should link neighbourhoods and urban villages. Between the centres, sub centres, urban villages and suburbs, cities should protect extensive and linked tracts of urban bush and parkland. Bush land, rivers and creeks should be maintained as open space and not disturbed by freeways and roads.

The car dependence of Australian cities is exacerbated by financial subsidies to road transport including to the motor industry, from tax concessions, fuel excise cuts and to road funding grants. This creates perverse incentives to car manufacturers. Instead car manufacturers should be given incentives or, through regulation, encouragement to produce hybrid/fuel cell technologies. Californian legislation requiring 10% of all vehicles to have zero emissions by 2010 is an interesting example of the sort of scheme that could be put in place in Australia.

ACF recommends that the Federal Government make the following changes to ensure more sustainable transport systems.

Changes to allocation of Federal funds

The Federal Government needs to reassess the allocation of funds to State and local governments for roads. Currently these funds, which are generally in the form of united grants, lead to new urban roads and freeways to go ahead in our cities without any real assessment of their environmental impact, or of sustainable alternatives.

Between 1975-98, the Federal Government spent \$43 billion on roads, \$1.2 billion on rail and \$1.3 billion on urban public transport – a car to public transport capital subsidy of over 28:1⁹.

The Federal Government needs to achieve a more even split of government transport funding between roads and other transport funding than is now the case.

As proposed in the Auslink green paper the federal transport funds should be combined into joint funding of an integrated national land transport network. However, the application of Auslink funding should be broadened to include urban public transport and cycling and pedestrian infrastructure and funding for planning and urban design measures to manage traffic, improve livability and promote transit oriented development.

Further, as agreed to by Commonwealth, State and Territory Governments in 1997 in the National Greenhouse Strategy, the Federal Government should ensure that they:

“Apply an integrated investment assessment framework’ to the funding of all transport infrastructure proposals, to be evaluated on a consistent basis, with consideration given to their economic, social and environmental benefits and costs, as well as their impacts on greenhouse gas emissions.”

In 2001, the Federal Government ceased the indexation of fuel prices. This is expected to cost the Federal Government \$2 billion to 2005 and \$20 billion to 2010. This decision was economically and environmentally unsound, and it should be reversed.

Public Transport funding

The Federal Government should establish a program through which seed funds for service improvement are made available to public transport service providers. The objective of the program would be to improve patronage on urban public transport systems through improvements to speed, frequency and connectivity of established public transport networks.

Changes to Fringe benefit tax concessions for company cars

Currently, fringe benefits to employees are focused almost entirely on the use of the private motor vehicle. Concessions for car parking, leased vehicles, petrol allowances and the use of company cars all lead to an over use of cars for work. Company vehicles make up to 60% of all new car sales and at least 40% of peak hour traffic are company cars.

Import Duty for 4WDs

Four wheel drives, (4WDs) once a vehicle used mainly by farmers, are increasingly common on urban roads. 4WDs now make up 20.6% of new passenger vehicles sales and this is growing, with sales up 7.5% in 2003.

4WDs currently enjoy a tariff rate that is 10% lower than for all other imported cars (all 4WDs are currently imported). This lower tariff provides an incentive to the urban use of the least efficient, most polluting and dangerous forms of passenger transport. The tariff on other imported cars is soon to be reduced from 15% to 10%.

⁹ Laird in Metropolitan Transport Forum Creating Choices 2002.

Bicycles

Cycling is sometimes viewed as little more than a recreational exercise. Yet bicycles represent an efficient, economical and healthy mode of transport. If developed as an urban commuter mode, bicycles also have the potential to significantly reduce fossil fuel use, traffic congestion and pollution in our cities and to improve health and reduce obesity. The National Bicycle Strategy should be reinvigorated with increased funding by the Federal Government, as an important environmental and public health measure.

Freight and Rail

Australian cities are facing serious problems from congestion and pollution due to growing urban road freight and passenger task. It has been estimated that emissions from road freight will increase by 51.0 percent between 1990 and 2010. This rate is higher than that for emissions from cars, which are estimated to increase by 39.7%. Light commercial vehicles, used mainly in urban areas, will make up a high proportion of this growth.

Recommendations

- Reassess the allocation of Federal Government transport funds to the States, to achieve a more even balance between road and other transport funding.
- The Federal Government should reinstate the indexing of fuel excise to the Consumer Price Index.
- Improve public transport patronage through a Federal fund for service improvements.
- The Federal Government should either remove Fringe Benefit Tax advantages for company car use and parking or provide equivalent advantages for public transport fares and bicycles.
- Increase the import tariff on 4WDs to 10% to be in line with that for other imported urban cars.
- The National Bicycle Strategy should be reinvigorated with increased funding by the Federal Government, as an important environmental and public health measure.
- Provide Federal Government funds for sustainable transport community education projects to support the uptake of sustainable transport options across the community.

6. Incorporate eco-efficiency principles into new buildings and housing

As noted earlier, buildings have a substantial impact on the energy, water, and waste we produce and consume in our cities. At the moment, due to our lifestyles and the way we have built and planned our cities, this level of resource intensity is grossly unsustainable.

This also means that buildings have huge potential to improve resource efficiency and stimulate sustainable industries. However the sheer number of players involved in each stage of the design, development, construction and management of buildings is a barrier to change. There is no clear mechanism to ensure that a building marketed to achieve high environmental performance will in fact deliver improved environmental outcomes. Often a building project will change hands several times before the project is completed. The Federal Government has a crucial role to play in encouraging the adoption of sustainable practices into standard building practices.

ACF proposes that a review of the Australian Building Code Board be conducted with a view to establishing a structure that will best implement sustainability in the building sector. The work program of the Australian Building Code Board should also be extended to broader sustainability issues across a broader range of buildings including the commercial building sector.

Decision Support Tools

A number of environmental rating tools for buildings have been developed over the past couple of years to assess the environmental credentials of buildings for regulatory compliance on the one hand and to provide a tool for market differentiation, and the promotion of green buildings on the other hand.

Recently, the Building Code of Australia introduced minimum energy efficiency requirements for new residential buildings. Some States argued against higher standards for the energy efficiency of the building envelope alone because of disagreements about the methodology used. The methodology does not include appliances such as air conditioning, heating and hot water and these contribute significantly to the energy consumption of the house, and particularly the peak demand, which will require significant investment if not addressed. The methodology also ignores the growth in energy consumption due to the growth in the growing size of new homes.

The SEDA developed Australian Building Greenhouse Rating Scheme (ABGRS) is a voluntary rating system for commercial buildings which is focussed only on greenhouse and complements broader based environmental rating tools currently under development such as NABERS and Greenstar.

Greenstar, currently under development by the Green Building Council of Australia aims to drive industry leadership in commercial building and is aimed at the top 25% of new buildings.

NABERS, developed by the Department of Environment and Heritage is a comprehensive environmental assessment tool that can be used for all commercial and residential buildings to assess performance and has potential to set targets for improvements.

To provide the best information to decision-makers it is crucial that these rating tools are based on sound analysis of the environmental performance of buildings. It is also crucial that we do not ignore the environmental improvements available if we address impacts from existing building stock. ACF supports the Federal Government developed NABERS rating system in this regard.

Residential Buildings

There has been much debate recently about the cost of housing our major cities, however the cost of a house is not just that paid at the point of sale but the cost of operation and maintenance across the life of the house.

The Building Codes Board of Australia recently introduced energy efficiency standards for all new residential buildings.

The Victorian Government has announced that from July 2005, compliance with new residential energy standards will require:

- 5-star energy rating for building fabric plus water saving measures; and
- a rain water tank; or a solar hot water service

Other States have also introduced at least 3.5 - 4 star energy efficiency for all new residential homes and some have also introduced mandatory water saving devices.

ACF proposes that the Australian Building Code Board revisit the issue of energy efficiency standards for homes with a view to introducing 5 star energy efficiency for all new residential homes and major renovations.

The assessment of the 5 star rating should include appliances for heating, cooling and lighting, in addition to the building envelope as well as balancing the efficiency of a building with its overall size.

Commercial Buildings

It is crucial that the Commonwealth funded research and development of the National Australian Built Environment Rating System (NABERS) should be followed up with a commitment to transforming the way we design, build and manage commercial buildings.

Targets and mandatory standards should be set across the full set of environmental criteria made available by the NABERS rating tool. As a priority, it is crucial that we take immediate steps to address the energy consumption of commercial buildings through the Australian Building Code and related instruments.

ACF proposes that mandatory 5 star ABGRS standards should be introduced to the Australian Building Code for all new commercial buildings and major refurbishment.

Recommendations

- That a review of the Australian Building Code Board be conducted with a view to establishing a structure that will best implement sustainability in the building sector.
- That Government funded research into sustainability and the built environment continue to develop decision-making tools such as the CRC for Construction Innovation and the Federal Government's NABERS program.
- That mandatory 5-star energy efficiency requirements be introduced, including appliances and solar hot water for all new residential buildings and major renovations including high rise apartments.
- That mandatory 5 star ABGRS standards be introduced to the Australian Building Code for all new commercial buildings and major refurbishment and followed up with ambitious mandatory requirements across the full range of environmental criteria available in NABERS.

7. Provide urban plans that accommodate lifestyle and business opportunities

In many ways planning is the most difficult and the most important determiner of whether our cities will ever be sustainable. The variance between State planning systems and between local authorities within States, means that solutions applied in one context are hard to transfer to another. Building and planning regulations have a different role in each state and this has implications for affecting change through a national mechanism such as the Building Code of Australia.

Local planning issues are often hotly contested and planners bear a huge responsibility for the balance between sustainability and competing priorities. At the local level, planners are almost universally overburdened with planning applications and overused objection mechanisms mean that administrative tribunals rather than planners are routinely making planning decisions.

Despite this, there are many examples of leadership in sustainability at the local government level and these should not be discouraged for the sake of consistency. However it is crucial that the learning is captured and shared across municipalities and the Federal Government should fund initiatives at the local government level which facilitate this.

The NSW Government is developing a web based decision support tool called BASIX, which will streamline the planning application process and make sustainability criteria consistent across the state. However this approach would be difficult to transfer to other states because of variances in planning systems.

In addition to this, planning for sustainable cities remains new territory with a lack of planning guidance or precedents for issues that will arise in the context of sustainable cities. For example, there is no clear guidance on solar access protection for buildings which have been specifically designed to use active and passive solar elements to reduce greenhouse gas emissions. Another example is the brewing debate on the transport versus building greenhouse benefits of urban consolidation.

Recommendations

- That a summit be held during the Year of the Built Environment to focus on solutions for sustainable cities in partnership with all levels of government, planners, architects, industry, heritage and environment groups.
- That guidance on sustainable planning be developed from this summit on the most difficult and contentious issues in sustainable planning.
- That an initiative be funded to enable local government planners to share experiences and examples of leadership in sustainable planning.

Conclusion: Toward sustainable communities

The Australian Conservation Foundation is very encouraged that the Federal Government has nominated 2004 as the National Year of the Built Environment. It is crucial that we use the year to make a real difference to the long term sustainability of our nation long after the Year of the Built Environment in 2004.

We look forward to contributing to the process in the coming year and encourage the Standing Committee to be bold in its recommendations for the future of our cities.