# HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE

# **Discussion Paper**

# Inquiry into a Sustainability Charter

The discussion paper has been prepared to provide guidance to people and organisations making submissions to the inquiry and does not seek to present the final views or conclusions of the Committee

# Inquiry into a Sustainability Charter

The House of Representatives Standing Committee on Environment and Heritage is undertaking a new inquiry into a *Sustainability Charter*.

The purpose of the inquiry is to make recommendation to the Australian Government on how they might frame a sustainability charter that can be proposed for ratification at a meeting of the Council of Australian Governments (COAG).

The discussion paper does not present the views or conclusions of the committee. The committee's report will be prepared at the conclusion of the inquiry.

The purpose of the discussion paper is to scope some of the key areas central to the preparation of a sustainability charter and to canvass input from a wide range of local and state governments, researchers, businesses, industry and community associations and individuals. The aim of this paper is to assist and challenge those who may make a submission or otherwise assist the committee in the inquiry.

The attached discussion paper identifies several components which contribute to a sustainability charter, and outlines the issues and vision of these components. At this stage, there are many more questions than answers.

Submissions to the inquiry may respond to the discussion paper or to all or some of the terms of reference. Details of the terms of reference and making a submission to the inquiry are provided overleaf.

# **Terms of Reference**

# Inquiry into a Sustainability Charter

On 12 September 2005 the House of Representatives Standing Committee tabled the *Sustainable Cities* report. The committee called for the development of a Sustainability Charter based on measurable outcomes, over a certain period, with intermediate milestones.

The charter should be aspirational. It must provide targets for the Australian community to meet and, once those targets have been met they must be reassessed so new targets can be put in place.

The Committee is now inquiring into and will report on key elements of a sustainability charter and identify the most important and achievable targets, particularly in relation to:

- 1. The built environment;
- 2. Water;
- 3. Energy;
- 4. Transport; and,
- 5. Ecological footprint.

The Committee invites submissions from individuals and organisations with an interest or expertise in these matters.

Submissions can be e-mailed to <a href="mailedto">Environment.Reps@aph.gov.au</a> or sent to the following address:

Environment and Heritage Committee House of Representatives Parliament House Canberra ACT 2600

The closing date for submissions is **Friday May 12 2006** although the committee will accept late submissions.

The discussion paper is available at <a href="https://www.aph.gov.au/house/committee/environ">www.aph.gov.au/house/committee/environ</a>

# Discussion Paper Sustainability Charter

# **BACKGROUND**

On 12 September 2005 the House of Representatives Environment and Heritage Committee tabled the *Sustainable Cities* report.

The report has 32 recommendations. While most of the areas covered are traditionally the preserve of the States and Territories, the committee believes it is time for the Australian Government to take a leadership role.

To oversee Australia's move towards sustainability, the committee recommends the establishment of an **Australian Sustainability Commission** and an **Australian Sustainability Charter**. The Commission should explore the concept of incentive payments to the States and Territories for sustainability outcomes, along the lines of the National Competition Council model.

# THE SUSTAINABILITY CHARTER

The charter should be aspirational. It must provide targets for the Australian community to meet and, once those targets have been met they must be reassessed so new targets can be put in place. As Mr Chris Davis, Chief Executive officer of the Australian Water Association told the Sustainable Cities inquiry "sustainability is a journey not a destination."

In the *Sustainable Cities* report the committee was prompted to make a recommendation for a charter based on a proposal by a range of submissions that suggested targets would be defined by measurable outcomes, over a certain period, with intermediate milestones.

Concerns were raised by the CSIRO with regard to reporting frameworks. The CSIRO recommended improved benchmarking and reporting processes, as well as the upgrading of State of Environment reporting across all levels of government.

The committee's recommendation for a sustainability charter was to introduce a national set of objectives that the Australian community could relate to and identify with. The charter would therefore include a system of public reporting.

The committee also noted that the charter would need to be regularly reviewed and updated; it must be a 'living' document in line with the definition of sustainability as a journey and a set of principles and practices.

# THE SUSTAINABLE CITIES REPORT

The *Sustainable Cities* report had 32 recommendations. Whilst not all of these recommendations related directly to the setting up of the Sustainability Charter – many of them did or would provide leadership in areas to be touched on by the charter. Recommendations directly related to his question include:

#### Recommendation 1

The committee recommends that the Australian Government

- Establish an Australian Sustainability Charter that sets key national targets across a number of areas, including water, transport, energy building design and planning.
- Encourage a Council of Australian Governments agreement to the charter and its key targets.

#### Recommendation 2

The committee recommends that all new relevant Government policy proposals be evaluated as to whether they would impact on urban sustainability and if so, be assessed against the Australian Sustainability Charter and the COAG agreed sustainability targets.

# Recommendation 3

The committee recommends that:

- the Australian Government establish an independent Australian Sustainability Commission headed by a National Sustainability Commissioner;
- task the Commission with monitoring the extent to which Commonwealth funds and State and Territory use of Commonwealth funds promotes the COAG agreed sustainability targets; and
- task the Commission with exploring the concept of incentive payments to the States and Territories for sustainability outcomes along the lines of the National Competition Council model.

# **OTHER REPORTS**

In addition to the above recommendation the committee referred to the House of Representatives Standing Committee on Environment and Heritage report *Employment in the Environment Sector: Methods, Measurements and Messages* which examined the Mandatory Renewable Energy Target (MRET). The committee found that, although mandated requirements are not always an appropriate driver of sustainability, there is a clear role for MRET in providing growth opportunities for the environmental sector and that the policy should be retained and targets increased.<sup>1</sup>

The report made the following recommendation:

- . . . that the Australian Government:
  - Retain the Mandatory Renewable Energy Target;
  - Substantially increase the Mandatory Renewable Energy Target as part of a multifaceted approach to increase market demand for and supply of renewable energy and; and
  - Implement a timely review of the Mandatory Renewable Energy Target for beyond 2010 with a view to furthering the uptake of renewable energy on Australia.<sup>2</sup>

# OTHER SUSTAINABILITY REPORTING

# Sweden's Environmental Objectives

In 1999, the Swedish Parliament voted to adopt 15 environmental objectives:

- Reduced climate impact;
- Clean air;
- Natural acidification only;
- A non-toxic environment:
- A protective ozone layer;
- A safe radiation environment;
- Zero eutrophication<sup>3</sup>;

House of Representatives Standing Committee on Environment and Heritage, *Employment in the Environment Sector. Methods, Measurements and Messages*, Parliament of the Commonwealth of Australia, Canberra, November 2003, p. 128.

House of Representatives Standing Committee on Environment and Heritage, *Employment in the Environment Sector. Methods, Measurements and Messages*, Parliament of the Commonwealth of Australia, Canberra, November 2003, p. 128.

- Flourishing lakes and streams;
- Good-quality groundwater;
- A balanced marine environment, flourishing coastal areas and archipelagos;
- Thriving wetlands;
- Sustainable forests;
- A varied agricultural landscape;
- A magnificent mountain landscape; and
- A good built environment.

Underpinning these national objectives are five fundamental principles:

- Promoting human health;
- Safeguarding biological diversity;
- Protecting cultural heritage;
- Preserving long term productive capacity of the ecosystem; and
- Ensuring that natural resources are properly managed.

The Swedish Parliament has established a high benchmark that is not framed around the usual rhetoric of sustainability. Sweden frames its overall challenge as one of 'handing over to the next generation a dynamic but sustainable society in which the major environmental problems have been solved.' This challenge demands of the nation not only targets of sustainability, but solutions to current environmental issues.

Importantly, the Swedish system has introduced an approachable set of objectives and a system of public reporting. The objectives themselves are in plain language (with the exception of one specialised technical term), in keeping with this as a national set of objectives that the population must relate to and identify with.

Eutrophication is a process whereby water bodies, such as lakes, estuaries, or slow-moving streams receive excess nutrients that stimulate excessive plant growth (algae, periphyton attached algae, and nuisance plants weeds). This enhanced plant growth, often called an algal bloom, reduces dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die.

Mr Jan Bergquist, Chairman of the Environmental Objectives Council, Sweden, Presentation to the National Conference of Parliamentary Public Works and Environment Committees, Melbourne, July 2004.

The committee believes that the Australian sustainability charter should form the basis for policy funding decisions. The charter must therefore connect to and become part of Australian everyday life.

# National Strategy for Ecologically Sustainable Development

In 1987 the World Commission on Environment and Development, in a report titled *Our Common Future* (the Brundtland Report), recognised that sustainable development meant adopting lifestyles within the planet's means. The report also clearly identified that the current patterns of economic growth could not be sustained without significant changes in attitudes and actions. Australia's response has been to adopt and further refine the concept of sustainable development, taking into account our unique natural environment, the aspirations and values of the Australian people and the prevailing patterns of economic production and consumption. The result is **Ecologically Sustainable Development - ESD**.

Put simply, ESD means using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and quality of life for both present and future generations is increased. It requires changes in the nature of production and consumption so that they can better satisfy human needs while using fewer raw materials and producing less waste. The key to ESD is integrating environment and development considerations in decision-making.

The committee's *Sustainable Cities* report showed that whilst these principles were outlined nearly 20 years ago they are still relevant to, and underpin the concept of a sustainability charter.

# Monitoring

Monitoring and reporting are key elements in ensuring implementation. The National Strategy for ESD, along with the National Greenhouse Response Strategy, is the subject of continuing dialogue between the three levels of government. An **Intergovernmental Committee on ESD (ICESD)** monitors implementation and reports to Heads of Government. A system of annual national reporting to the UN Commission on Sustainable Development (CSD) is also an important element in monitoring progress.

# Western Australian State Sustainability Strategy

# Purpose of the State Sustainability Strategy

In the State Sustainability Strategy, the Western Australian Government has addressed sustainability comprehensively for the first time. While there have

been elements of sustainability within government policy in the past, the Strategy is the first attempt in WA to meet the needs of current and future generations through integrating environmental protection, social advancement and economic prosperity.

The purpose of the State Sustainability Strategy is to illustrate how the WA government will respond to the sustainability agenda by adopting the sustainability framework and highlighting actions across government that give meaning to the framework. By focusing the Strategy on agency activity, the WA government is demonstrating its important leadership role in supporting the transition to a sustainable future.

# Sustainability framework

Western Australia's first step in approaching sustainability has been to create a framework for thinking and decision-making. The concept of sustainability is simple but it is difficult to implement because of our tendency to work in isolation. Most professions, corporations, institutions and government practices around the world have been built around the separation of the environmental, social and economic dimensions, with economic factors being the dominant consideration. Sustainability is challenging everyone to find a new way of approaching the future. Western Australia is joining this process. It can only do this if there is a re-evaluation of the principles, visions and goals that guide how we operate.

The Strategy proposes a set of sustainability principles that guide how government, industry and communities think about and approach the management of resources. These principles are aimed at facilitating change that has net social, environmental and economic benefit for current and future generations. Sustainability principles will underpin the State Strategic Planning Framework for the public sector and other government policies such as the Regional Policy Statement.

The sustainability framework consists of:

- seven foundation principles and four process principles that reflect the core values of sustainability
- six visions for Western Australia's sustainability
- six goals for government and forty-two priority areas for action.

# The seven foundation principles are:

- decision-making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

- the global dimension of environmental impacts of actions and policies should be recognised and considered
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- cost-effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- decisions and actions should provide for broad community involvement on issues which affect them.

# Sustainability principles

Sustainability principles have often been developed through global agreements and have begun to be placed in legislation over the past decade in Australia and overseas, but the social and economic aspects of sustainability have rarely been included. The WA State Sustainability Strategy deliberately attempts to change this.

## NATIONAL STATE OF THE ENVIRONMENT REPORTING

The National Strategy for Ecologically Sustainable Development called for national State of the Environment reporting. That led in part to the production of the first State of the Environment report in 1996.

State of the Environment reporting is not aspirational and is therefore, not of itself, a substitute for a sustainability charter. It is, as the name suggests, a report card on Australia's environment. Its purpose and objectives are to provide accurate, up-to-date and accessible information about environmental and heritage conditions, trends and pressures for the Australian continent, surrounding seas and Australia's external territories.

The 2006 State of the Environment Report will

- report on major causal factors that are influencing Australia's environment and heritage
- report on the effectiveness of responses designed to address change
- identify the issues most relevant to the sustainability of Australia's environment and heritage;
- contribute to public understanding of the state of Australia's environment and heritage
- identify relevant gaps in information
- further develop and improve the SoE reporting process
- facilitate policy development at all levels of government.

The national State of the Environment report is the major mechanism in which resource management and environmental and heritage issues are comprehensively reported and analysed on scales that transcend State and Territory boundaries.

The environment and heritage is covered in seven major themes: Atmosphere, Land, Inland Waters, Coasts and Oceans, Biodiversity, Human Settlements, and Natural and Cultural Heritage.

The regular production of State of the Environment information provides scope for changes in environmental and heritage pressures and condition to be tracked over the long term.

# State of the Environment Reporting and the Charter

The committee believes that the State of the Environment reporting framework would be an ideal mechanism to report on sustainability indicators in order to provide benchmarking and monitoring data. The framework could therefore be adapted and improved to form the basis for the development of targets and measures of sustainability progress under the Sustainability Charter. The development of the reporting framework for the next State of the Environment report after 2006 and the development of a charter should therefore proceed in unison.

# THE NATIONAL COMPETITION COUNCIL

The National Competition Council was established by all Australian governments in November 1995 to act as a policy advisory body to oversee their implementation of National Competition Policy (NCP).

The Council does not set reform agendas or implement reforms; these are the responsibility of the various governments.

Although the Council is funded by the Commonwealth Government, it is accountable to all Australian States and Territories through the Council of Australian Governments (CoAG). As a statutory body, the Council is independent of the executive (political) arm of governments.

The Council comprises four part time councillors with a variety of backgrounds who are drawn from different parts of Australia. It is supported by a secretariat of approximately 20 staff located in Melbourne.

# The Council has four main roles:

- 1. assessment of governments' progress in implementing the NCP reforms and recommendations on competition payments;
- 2. advice on the design and coverage of access rules under the national access regime;
- 3. community education and communication covering both specific reform implementation matters and NCP generally; and
- 4. other specific projects requested by Australian governments.

The Australian Government makes NCP payments to the states and territories (on a per capita basis), where they achieve satisfactory progress against the NCP and related reform obligations.

# Applicability to the Sustainability Charter

In the *Sustainable Cities* report the a number of submissions emphasised the need to adequately fund and 'join-up' the levels of government. Responsibilities should be linked to accountability and funding. A sustainability equivalent to competition payments could be the way to have this happen.

Just as National Competition Policy allows for competition payments a sustainability commission may be able to pay those governments that meet or exceed targets set in the Sustainability Charter.

# EXAMPLES OF OTHER MONITORING OF SUSTAINABILITY OUTCOMES

Following are two examples of organisation that will provide ongoing monitoring of sustainability outcomes in conjunction with the Sustainability Charter.

# <u>Australian Conservation Foundation - A National Agenda for a Sustainable</u> <u>Australia: 5 tests for policy performance</u>

- 1. **Show National Leadership:** Reverse Australia's environment damage and promote a clean and efficient economy by a Prime Minister and Premier's commitment to a National Sustainability Policy, implemented through an independent National Sustainability Council.
- 2. **Cut Greenhouse Pollution:** Ratify the Kyoto Protocol, establish national mandatory targets of 10% renewable energy by 2010 and 50% reduction in energy use by 2025, backed by a revenue neutral carbon tax or domestic greenhouse emissions trading.
- 3. **Repair our Land and Rivers:** Save the Murray River by increasing annual environmental flows by 1,500 gigalitres over the next decade, halt all large-scale land clearing and tackle salinity through financial incentives for the revegetation of cleared land.
- 4. **Protect Our Great Natural Areas:** Ensure that at least 50% of the Great Barrier Reef Marine Park and 25% of Australia's marine environment is fully protected; protect all old growth and high conservation value forests, and protect the outstanding natural and cultural heritage of Northern Australia.
- 5. **Support Sustainable Living:** Introduce a 5 Star Green Cities Program with mandatory energy and water efficiency standards for commercial and domestic buildings, and help for families wanting to install solar power and rainwater tanks. Stop the proposed nuclear reactor in Sydney and the nuclear waste dump in South Australia. Support sustainable living in our Asia Pacific region.

# <u>Australian National Audit Office - Cross Portfolio Audit of Green Office</u> Procurement

The Australian Government has indicated that it aims to be at the forefront in environmental purchasing practice through:

• buying goods and services that seek to minimise possible environmental impacts;

- working with industry to encourage continuous reduction in the adverse environmental impact of goods and services; and
- assessing the environmental impact of goods and services against informed and internationally recognised standards and methods.

The emphasis of the audit was on green office procurement and sustainable business practices and the value for money within this context. As such, the audit report provides a status report on the implementation of ESD within the office environment of the Australian Government. The audit used a survey approach in conjunction with selected audit investigations to obtain information across 71 agencies and entities selected on the basis of materiality in procurement and coverage across large, medium and small organisations. The agencies selected represented approximately 35 per cent of all government bodies and over 95 per cent of all procurement spending noted on the Department of Finance and Administration (Finance) database on contracts.

The audit has identified a small number of better practice examples of green office procurement across the Australian Government. However, overall there were significant shortcomings identified in terms of the application of whole of life cycle costing and in the management of the environmental impacts of procurement decisions. Compliance with Australian Government policy requirements has improved over time in areas such as energy efficiency in buildings with important greenhouse gas emissions and cost savings being achieved.

It is clear that the process of auditing undertaken by the Australian National Audit office (ANAO) can have a significant reporting impact on the levels of sustainable practices with the Australian Government.

# **ECOLOGICAL FOOTPRINT**

The committee's *Sustainable Cities* report used a definition of ecological footprint from the environmental economist William E. Rees, Professor of Community and Regional Planning at the University of British Columbia who co-invented the 'ecological footprint' concept with then PhD student Dr Mathis Wackernagel. He defined it as follows:

The ecological footprint is the corresponding area of productive land and aquatic ecosystems required to produce the resources used, and to assimilate the wastes produced, by a defined population at a specified material standard of living, wherever on Earth that land may be located.

The report noted that the concept can be applied to Australia as a whole:

On a global level, Australia's ecological footprint of 8.1 hectares per capita indicates that its citizens are consuming between two and four times their 'fair share' of the world's ecologically productive land placing it among the top five consuming nations of the world.<sup>5</sup>

The concept can also be applied to industrial cities. For example, Sydney's ecological footprint is 150 times greater than the area of Sydney itself, which means:

... in order to supply the materials and energy that people living in Sydney need and to absorb the waste, the Sydney population depends on an area of the earth's surface about 150 times greater than the full area of Sydney.<sup>6</sup>

Professor Peter Newman made an observation that a city would be become more sustainable if it reduced its ecological footprint at the same time as improving its liveability.<sup>7</sup>

# **Ecological Footprint and the Sustainability Charter**

Reduction in the ecological footprint of Australia's major cities could be one of the major, overarching and measurable objectives of the charter. This would also provide a clear link between those targets that are most appropriate for cities and the regional and rural areas as these are often impacted by the size of a cities ecological footprint.

# SUSTAINABILITY OBJECTIVES AND THEIR MEASUREMENT

It is difficult, and perhaps inappropriate to compare different communities' objectives for sustainability. An issue of extreme importance to one community's view of sustainability may not necessarily affect another community in the same. As to measurement, it is often the case that broad aspirational objectives couched in an overarching statement are unable to be

Professor Anthony McMichael, National Centre for Epidemiology and Population Health, Transcript of Evidence, 27 January 2004, p. 83.

Dr Peter Newton, 'Urban Australia 2001', Australian Planner, Vol 39, No 1, p. 37.

Professor Peter Newman, *Sustainability and Planning: A Whole of Government Approach*, Paper presented to the Planning Institute of Australia, 2001, p. 4.

quantifiably measured. The committee is aware of some significant attempts at defining sustainability gaols. These include work in Sweden across several sectors as outlined below.

### General

# Sweden

We want to pass on to the next generation a society in which the major environmental problems now facing us have been solved.

#### Western Australia

Sustainability is meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity.

# **Questions for consideration**

- Should a sustainability charter consist of aspirational statements, set targets (such as measurable water quality) or both?
- What research will be needed to develop and support the Sustainability Charter?
- Can existing standards (such as the Water Efficiency Labelling and Standards (WELS) Scheme) be applied to the Sustainability Charter?
  - ➤ What are they?
- Can the charter be framed in such a way to ensure that it can be integrated into all level of government decision making?
- Will there be a cost/gain to the economy by introducing the target(s)?
- Could a sustainability charter be incorporated into national State of the Environment reporting?
- Is National Competition Policy a good template for consideration of incentive payments for sustainable outcomes?
- How should payments be awarded under the Sustainability Charter?
- Is it possible to measure cultural and social values in relation to a Sustainability Charter?

### The built environment

#### Sweden

Cities, towns and other built-up areas must provide a good, healthy living environment and contribute to a good regional and global environment. Natural and cultural assets must be protected and developed. Buildings and amenities must be located and designed in accordance with sound environmental principles and in such a way as to promote sustainable management of land, water and other resources.

### Western Australia

Encourage the widespread adoption of sustainable building and construction.

# Questions for consideration

- What objectives are applicable to the built environment?
  - ➤ How would these be measured?
- How should we rate the sustainability of existing building infrastructure?
  - ➤ Could a measurement of level of retro-fitting achieve this?
  - ➤ How would we measure levels of retro -fitting?
- Do we need to protect heritage buildings as part of the sustainability charter?
- Can existing building standards, such as the 5 star rating system, be incorporated into the Sustainability Charter?

# Water

#### Sweden

Groundwater must provide a safe and sustainable supply of drinking water and contribute to viable habitats for flora and fauna in lakes and water courses

This will be measured by:

- the level of fluorides and nitrates in water
- the protection of water-bearing geological formations
- protection of groundwater levels
- provision of good quality drinking water as measured by the Swedish standards for good-quality drinking water with respect to anthropogenic pollution.

#### Western Australia

- Ensure that land uses do not contaminate drinking water catchments.
- Improve understanding of aquatic systems and link this to the management of all aquatic systems.
- Protect all drinking water catchments and all aquatic systems of high environmental/conservation, scenic and heritage significance.
- Manage aquatic systems to agreed conditions for a range of environmental values through a catchment management context.
- Incorporate social and cultural values when managing aquatic systems.
- Increase community awareness and involvement in the management and protection of drinking water catchments and all aquatic systems.
- Ensure that abstraction of water does not exceed the water requirements of aquatic ecosystems.
- Provide for the protection of water-dependent ecosystems, while allowing for the management and development of water resources to meet the needs of current and future users.
- Ensure stormwater is recognised as a valuable component of the total water cycle and management objectives incorporate the sustainability of the receiving environment.

As part of their action plan the WA Government will be developing benchmark environmental quality criteria for aquatic systems to assist in the long-term assessment of progress towards meeting the objectives.

- *Reduce water consumption.*
- Extend responsibility for water supply to the planning system (water sensitive design) and to local government (Regional Councils) for groundwater supplies.
- Achieve significant wastewater re-use.
- Investigate long-term innovative water supply options that have broad sustainability outcomes

Part of the action plan for the State Water Strategy will be to provide for Perth's long term water supply needs through a sustainability assessment of the next major water supply source.

# Questions for consideration

- How should water quality be measured?
- Should targets be focused on reducing water consumption, increasing water re-use or both?
- How can we measure the health of water catchment areas?

# **Energy**

#### Sweden

The environmental impact of energy use in residential and commercial buildings will decrease and will be lower in 2010 than in 1995. This will be achieved, inter alia, by improving energy efficiency and eventually reducing total energy use.

#### Western Australia

- Reduced reliance on fossil fuels and increased reliance on renewable forms of energy in Western Australian energy systems.
- Adoption of best practice energy management in the Western Australian community, including government.
- Greater awareness of the environmental, economic and social benefits of energy efficiency and renewable energy by all Western Australians.

# Questions for considerations

- How should we measure the use of renewable energy?
- How do we encourage an increase in renewable energy use?
- Can we measure the awareness of the environmental, economic and social benefits of energy efficiency and renewable energy?

# **Transport**

#### Western Australia

- Maximise the opportunity to increase residential, employment, retail community and entertainment activity around key transport nodes and in major centres.
- Achieve a more sustainable balance between car use and other transport options through the promotion and provision of efficient and effective public transport and non-motorised personal transport alternatives.

#### **Questions for consideration**

- How do we judge the efficiency of transport systems?
- What transport infrastructure measures will reduce private transport needs?
  - ➤ How do we measure these?