

SUSTAINABLE TRANSPORT

RESPONDING TO THE CHALLENGES



SUSTAINABLE ENERGY TRANSPORT TASKFORCE REPORT NOVEMBER 1999

REPORT SUMMARY



The
Institution
of Engineers,
Australia

SUSTAINABLE TRANSPORT

RESPONDING TO THE CHALLENGES

Sustainable Energy Transport Taskforce Report 1999

The Sustainable Energy Transport Task Force of the Institution of Engineers, Australia has produced a report entitled "Sustainable Transport - Responding to the Challenges". The Task Force was convened to consider the role that transport might play in contributing to a more sustainable energy culture in Australia. The Task Force focussed on what are considered to be the most critical policy issues or key elements in a sustainable transport framework and developed a series of recommendations for future action.



The Task Force recommends that the Commonwealth, State, Territory and Local Governments:

1. Taxation and Fiscal Measures

- (a) Amend taxation policies so they do not favour use of private motor vehicles through salary packaging and company-provided parking, which potentially discourages use of urban public transport.
- (b) Accelerate the introduction of transparent user-pays pricing regimes that focus on direct charging for use rather than indirect taxation. Charges should reflect and communicate the full environmental, health and economic costs of our transport systems, fuels and choices.
- (c) Expand the clean-fuel credits program announced in 'A New Tax System' to commercial vehicles and buses (under 20 tonnes) operating in urban areas where they are currently precluded from clean-fuel credits.
- (d) Encourage the development of intelligent transport systems that allow for effective congestion pricing in urban areas and mass-distance charging for heavy vehicles.

2. Transport investment

- (a) Commonwealth to increase investment for urban transport. Investment is specifically required to improve intermodal connections; help fund circumferential road networks linking with the national highway system; and provide seed investment funding for infrastructure that will enable greater public transport provision.
- (b) Encourage investment in regional transport systems to improve the competitiveness of rural industry.
- (c) Progress initiatives designed to produce competitive investment neutrality between transport modes.

3. Policy making

- (a) Place emphasis on a more holistic approach to transport policies, integrating environmental

"Reform and innovation in our transport systems are vital."

considerations into planning and investment decisions.

In particular the Commonwealth needs to coordinate and direct fiscal, regulatory and environmental legislation to better support sustainable transport outcomes.

- (b) Review and augment public sector professional expertise across all relevant departments so that they are an informed buyer of transport planning, operations, infrastructure and research advice.
- (c) Agencies, including Finance, Treasury, Transport and Health, should better coordinate and evaluate private sector proposals and participation in the transport sector.
- (d) Place priority on the need for industry, innovation, and research and development policies and commitments that support the development of cleaner transport fuels and technologies.

4. Transport planning

- (a) Make the early identification of future transport corridors a priority in transport planning. In particular, improve planning and coordination across all levels of government for city-port connections and road and rail connections with ports.
- (b) Place greater focus on intermodal integration to improve freight and transit efficiency.
- (c) Incorporate technological improvements in transport, such as hoverways, magnetic levitation, airlines, beltways and pipelines in transport planning strategies and considerations.

5. Environmental input

- (a) Take a more holistic approach to integrate environmental considerations into transport policy, planning and investment decisions. This must go beyond current Commonwealth, State and Territory environmental impact evaluations in order to examine wider impacts on health, sustainability and greenhouse gas emissions.
- (b) Progress as a matter of urgency
 - the National Greenhouse Response Strategy requirement (Measure 3.3) that all jurisdictions review and amend environmental impact assessment processes to incorporate greenhouse gas emissions from proposed projects
 - the inclusion of greenhouse factors as a trigger for environmental assessment and approval for all new transport projects that have the potential to be major emitters of greenhouse gases in their construction and/or operation

- (c) Give greater consideration to alternative transport options when determining infrastructure investment priorities.
- (d) Consider comparative energy consumption and greenhouse emissions when assessing competitive project proposals.
- (e) Base feasibility studies and approvals processes for major projects on common, comparative evaluation procedures that incorporate economic and environmental life-cycle cost-benefit analysis.

6. New Technologies

- (a) Undertake further research to compile comprehensive data on the pollutant and greenhouse effects of existing Australian petrol and diesel, in comparison with Euro2 petrol and diesel and alternative fuels such as natural gas and liquid petroleum gas.
- (b) If necessary, implement additional measures to ensure that the Australian refining industry can deliver fuels compliant with Euro 4 diesel and Euro 3 petrol standards by 2006 on a national basis.
- (c) Support Australian refining industries to maintain Australian production capability, with due regard to defence needs and requirements for flexibility in competition policy that may be necessary to ensure national production capability.
- (d) Provide incentives to encourage accelerated market introduction and demonstration of low-emission hybrid vehicles and dedicated natural gas vehicles (cars, trucks and buses).
- (e) Accelerate the harmonisation of Australian Design Rules with European Design Rules to remove impediments to the commercial introduction of innovative, clean-vehicle technologies.
- (f) Increase research and commercialisation funding for Australian innovation in new vehicle and fuel technologies, such as the CSIRO aXcess hybrid electric car and associated automotive research in hybrid vehicle systems and componentry, natural gas vehicle technologies, high-volume ethanol production, and fuel cell innovation.

7. Transport pricing and demand management

- (a) Undertake research into the development, application and administration of road pricing, charging and associated demand-management technologies made possible by intelligent transport systems.

"There must be a long-term vision for sustainable future transport systems."



Sustainable Energy Transport Taskforce Report 1999

The broad challenges: greenhouse, health, energy and congestion

There is growing concern about our transport systems and the environmental, social and health impacts of transport.

Sustainable transport is about

- reducing the deleterious health and environmental impacts of current energy consumption
- reducing greenhouse emissions and other pollutants
- achieving greater economic and environmental efficiencies
- overcoming the current lack of transparency in the pricing of transport facilities and services, and
- addressing pending resource scarcity.

Current patterns of transport growth and energy consumption already pose serious problems that need to be resolved in the immediate and longer term. Reform and innovation in our transport systems are vital. So too is the gradual reshaping of the social and economic expectations of what our transport systems should be, what we should demand of them, and how we should use them.

Long term vision

There must be a long-term vision for sustainable future transport systems that includes:

- basing transport on non-polluting, non-depleting energy sources
- developing the least carbon and pollutant intensive infrastructure investment, transport technologies and modal options

· focussing innovation within the transport sector to encourage shifts in lifestyle, values and attitudes to bring about reductions in resource consumption and impacts in the transport sector

· reducing growth in demand for passenger and freight transport by fostering new work and business practices that reduce the need for travel or freight

· assessing transport infrastructure investment and industry development in terms of its life cycle, including an assessment of the full economic, energy and other resource impacts

Structural change that is based on greenhouse performance as the common denominator in transport planning, investment and operation is essential to achieving positive outcomes.

Unsustainable levels of growth in pollutant and greenhouse gas emissions from transport must be reversed. This requires action through technological innovation and travel demand management strategies, as well as the setting of ambitious targets and incentives for the introduction of low-emission vehicle technologies, clean fuels, and appropriate modal choices.

Transport pricing regimes should be reformed to better allocate economic and environmental costs and to encourage people to change their travel behaviour and choose more sustainable transport modes.

Integrated land-use and transport planning should be further encouraged and be supported by clear national transport priorities.

The intermodal competitiveness of our freight systems should be improved to produce efficient environmental and economic outcomes by increasing the contribution that rail and shipping make to the national freight task.

A copy of the report can be obtained from the Director, Engineering Practice, Institution of Engineers, Australia, 11 National Circuit Barton, ACT 2600, or contact (02) 6270 6525, e-mail mdwyer@ieaust.org.au. Alternatively, the report can be downloaded from www.ieaust.org.au/policy/publications.html



SUSTAINABLE TRANSPORT
RESPONDING TO THE CHALLENGES