



**Sustainable
Transport**
Coalition WA

PO Box 272
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2 May 2005

Committee Secretary
Senate Rural and Regional Affairs and Transport Committee
Senate
Parliament House
Canberra ACT 2600

Dear Madam/Sir

AusLink (National Land Transport) Bill 2004

The Sustainable Transport Coalition has become aware of the Committee's inquiry into the AusLink (National Land Transport) Bill. We support the move to a more integrated land transport funding regime but are disappointed at the narrow focus proposed in the Bill and the extent of Ministerial discretion in providing funds.

Australia's land transport faces significant challenges that demand sustainable, integrated solutions. One major concern is the prospect of global oil production falling short of growing demand and the lack of ready transport energy alternatives. We are heavily dependent on oil to fuel passenger and freight transport. The economic and social consequences of oil supply shocks and escalating fuel prices (above US\$50/barrel over recent months) must make this a key factor in planning and funding national land transport infrastructure. Please find further material on oil vulnerability enclosed.

We offer the following comments on specific aspects of the AusLink Bill for consideration by the Committee:

Commonwealth government funding should be directed to projects that will deliver sustainable solutions to national transport requirements. To this end the Minister should be informed of the environmental, social and economic costs and benefits of proposals put forward for funding in order to judge their relative merits. Unfortunately the Bill (clause 11) makes no requirement for triple bottom line assessment and any assessments that may be undertaken are merely matters to which the Minister may have regard. It is important that a consistent, triple bottom line evaluation be applied to all projects – the Bill should mandate this.

Proposals should be put forward in the context of an integrated transport plan developed with community, government and industry stakeholders. The Bill makes brief reference to corridor strategies (section 4) but does not require them, does not set out what they should address and does not how they should be prepared. The Bill should provide a framework for integrated transport plans and require opportunity for public involvement. Similar requirements are included in the US equivalent, the Transportation Equity Act for the 21st Century 1998.

Decisions as to which proposals should be funded are at the sole discretion of the Minister (clause 9). Given the significant public funds involved and recent controversy over funding decisions, a more transparent process is essential including independent review of proposals. The AusLink Green Paper proposed a National Transport Advisory Council to provide advice on investment priorities. The Bill does not propose any such body, which we regard as a significant flaw that will detract from public confidence in the process of assessing and funding projects. The Bill should be amended to provide for independent, public review of proposals.

The Bill sets out a narrow scope for projects that could receive funding (clause 10), emphasising the construction of infrastructure as part of the national land transport network. If the aim is to enhance transport efficiency for national benefit, as the object suggests (clause 3), then other measures should be eligible for funding. For example, improvements to urban public transport services or a behavioural travel demand management program could reduce commuter traffic to the benefit of freight transport efficiency in urban areas. More innovative solutions are needed to address transport challenges sustainably – the Bill should enable funding to proposals that do this.

Black spot funding (Part 7) and Roads to Recovery funding (Part 8) should not be restricted to constructing or maintaining road infrastructure (clause 71, 90). The provision of pedestrian and bicycle facilities within or beyond the road reserve can provide safety and other benefits. The number of road crashes involving pedestrians or cyclists is a significant concern - funding should be available to reduce this problem. Some local councils have previously allocated Roads to Recovery funds to bicycle paths and footpaths, it is unclear whether this would be possible under the Bill (clause 90). The Bill should be amended to enable funding for on or off-road pedestrian and cycle measures that would enhance road safety.

The provision of funding for research into land transport research is important. The definition applied in Part 5 appears restrictive, referring to land transport operations involving road or rail. Areas worthy of greater research attention include land use and behavioural measures that could reduce urban car dependence, transport energy including vulnerability to peaking oil supply and smarter freight logistics.

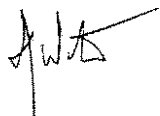
The Australian Land Transport Development Act 1988, application of which is to be phased out under AusLink, includes positive elements absent from the Bill in question, such as provision to fund urban public transport and broader scope for research that can be funded. In these respects, the AusLink Bill is a step backwards.

Many comments that the STC made on the AusLink Green Paper in February 2003 are relevant to the current Bill. A copy of the submission is enclosed for the Committee's information.

We urge consideration of these issues in the current inquiry so that the legislation provides a better framework for funding land transport priorities. Further, we urge the Committee to consider oil vulnerability as a serious issue for Australia's transport system.

Should you require further information or want to discuss points raised herein, please contact Dr David Worth, phone 041 4509 043 or email d.worth@bigpond.com.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'D. Worth', with a long horizontal stroke extending to the right.

David Worth
Convenor

Submission on AusLink Green Paper

About the STC

The Sustainable Transport Coalition WA comprises local government authorities, non-government organisations representing cycling, environmental and health interests and a number of individuals and supporting groups. The STC works to promote policies and decisions that will facilitate efficient access, enhance community wellbeing and protect the environment.

Sustainable Transport

Transport is fundamental to economic activity and social interaction, yet increasing motorised transport, mostly private vehicles, oil fuelled and on road, is affecting our economic, social and environmental wellbeing.

Road transport accounts for a large and growing share of passenger trips and freight transport in Australia. By international comparison, Australia is very reliant upon road transport. (1)

This skewed transport system is a concern because motorised road transport is a significant source of greenhouse gas emissions and urban air pollution, is dependent on declining and increasingly costly oil supplies, contributes to social disadvantage and declining physical activity, and is a financial burden for households and the public purse. (2)

Reforming transport needs to be part of moves towards a sustainable society. Key steps must include:

- Reducing dependence on the car for personal (passenger) trips through measures to discourage unnecessary car travel, shift the burden of cost from car ownership to car use (user pays based charges or taxes), marketing travel alternatives and investing much more in enhancing those alternatives;
- Managing land use to reduce the need for travel, including redeveloping urban land to provide a mix of housing choices and integrating employment location, housing and green transport, and locating freight generating land uses on road and rail corridors;
- Managing freight transport to increase the share of freight carried by rail, reduce the road safety and community impacts of heavy road haulage and innovating logistics and local production strategies to reduce freight movements;
- Shifting to renewable energy sources, where gas may be a transition fuel but hydrogen or biofuels may be alternative fuels in a much more energy efficient transport system.

Following are comments on some key points in the Green Paper.

Transport and Land Use Planning

The Green Paper says (page 25) that better transport and land use planning is needed, it does not make clear how AusLink would help achieve this. Identifying a national land transport network should aid planning, but this in itself will not deliver better integration of transport infrastructure and land use. Reference is made (page 54) to Federal Government funding leveraging improved long-term transport and land use planning, however no explanation is offered on how this might work.

The Federal Government has played little role in land use and transport planning, even though the effectiveness of its transport investment may depend on supportive land use. Some positive research and policy development occurred under the Australian Urban and Regional Development Review and the National Housing Strategy in the early 1990s. Unfortunately the findings of these studies do not seem to have been acted on, and are not referred to in the Green Paper. (4)

The US ISTEA and TEA21 legislation required the formation of metropolitan planning organisations, citizen participation and preparation of long-range transport plans and transport improvement plans. This promoted an integrated, multimodal and holistic approach to transport and land use planning. Why is this approach not proposed in the Green Paper? (5)

National Land Transport Network

The Green Paper proposes identifying a national land transport network, which it defines as strategically important interstate and interregional corridors for major freight and passenger flows (page 33). As funding by the Federal Government will be directed to developing and maintaining this network, what it will include is a critical question.

The inclusion of urban corridors is mentioned in the paper (page 34). The selection of an urban and non-urban corridor could presuppose particular routes or modes and predetermine any later public assessment of environmental and social impacts or alternative options. This is topical given recent public debate over major freight routes in Perth's southern suburbs, and shows the need for early consideration of issues and community consultation. Further, options that may have been deemed acceptable ten or twenty years ago may not be now as community and professional thinking changes (e.g. value of natural areas, impact of induced traffic, changing travel patterns).

The selection of corridors should follow state and regional transport planning with community participation and strategic environmental assessment, rather than being an isolated, closed process. The process of identifying corridors should be considered further in developing the White Paper.

Project evaluation

Creating a single funding pool is an important feature of AusLink. How bids to access these funds will be assessed is a critical issue. The Green Paper briefly mentions (pages 58-59, 82-84) principles for the project evaluation process, including transparency,

the issue of pricing. Improved technology, increased recognition of the problem of induced traffic and the inability of increased capacity to provide any lasting solution to congestion should strengthen efforts towards use-based charges. AusLink should allow funding of pricing measures as a management solution to transport needs, especially in urban areas.

Division of responsibilities

The Green Paper defines (page 43) the Federal Government's responsibilities as freight transport as it relates to national economic growth and competitiveness, and national and interregional passenger transport. Urban passenger transport is seen as the responsibility of State, territory and local governments, with no mention made of cycling or walking. This division of responsibilities reflects the Federal Government's bias towards efficient freight transport and regional development; it unnecessarily limits the Commonwealth's role and ignores interconnections between freight and passenger transport issues.

The division of responsibilities should be discussed when developing the national transport policy (this highlights the problem of deciding on the funding regime before adopting the policy framework). There are strong grounds for the Commonwealth taking a broader role in transport policy, planning and funding to promote the national interest. These grounds include:

- Transport is a significant and increasing source of Australia's greenhouse gas emissions. The Commonwealth has committed to meet its international obligations to reduce emissions. The Commonwealth's influence over transport planning, transport investments and tax laws affect transport emissions.
- Australia's regional and urban areas share many transport challenges and would benefit from national monitoring, research and development. The Commonwealth can promote informed planning and innovation through more comprehensive transport statistics, system performance and funding for research and piloting innovative transport management and land use planning measures.
- Enhancing freight transport efficiency cannot occur in isolation from passenger transport and land use. Even if the Commonwealth is to make freight its focus, there must be system improvements that reduce growth in car commuting and inappropriate land development if freight transport is to be improved. (9)

Sustainability

The Green Paper uses the terms sustainable and sustainability several times, but the emphasis is on 'sustainable' economic growth and regional development (for example pages 42, 43, 66, 87). The Federal Government has clearly indicated that national economic growth is the priority, and this bias is shown in the proposed objectives for AusLink (page 43).

A more holistic and widely used view of sustainability is being taken by state and local governments, regional resource management organisations, local communities and even business. And this is reflected in the National Strategy for Ecologically Sustainable Development and state and regional strategies, such as the draft State Sustainability Strategy for WA. This broader definition of sustainability, that involves proactively

promotional and safety measures - the Commonwealth should play its part in doing this.
(12)

Rail infrastructure

Improving infrastructure is critical to increasing the share of freight transported by rail. The Green Paper notes (pages 21-22) that greater investment in rail infrastructure is needed. AusLink provides an opportunity to do this through its common funding pool and integrated project evaluation. The STC regards greater priority for rail as a necessary part of the proposed national land transport plan that will guide transport planning and funding by the Commonwealth. Ideally mode split targets will be included to promote change and drive policy and funding innovation. Supportive transport and land use planning at the state and regional level will be important to improve rail's competitiveness in markets where it can play a greater role and generate benefits for the community by reducing road freight traffic.

Endnotes

(1) A summary of national passenger and freight transport statistics and trends is given in the Green Paper. See also Laird et al 2001 *Back on Track* University of NSW Press, Sydney. A comparison of Australian, North American, European and Asian cities is provided in Newman, P., and Kenworthy, J. 1999 *Sustainability and Cities* Island Press, Washington DC.

(2) These impacts include:

Urban air pollution: Motor vehicles are the single greatest contributor of nitrogen oxides, hydrocarbons including air toxics and fine particles in the airsheds of Australia's capital cities. All cities experience, to varying degrees, pollutant loads pose a health risk and the incidence of high pollution days are likely to increase in vehicle use increases as predicted. Health impacts and costs are difficult to quantify, though the National Environment Protection Council (1997 *Draft National Environment Protection Measure and Impact Statement for Ambient Air Quality*) estimated savings in health costs from reducing pollutant levels, including over \$4.8M annually from reduced nitrogen dioxide and up to \$250M over ten years from lower ozone levels.

Greenhouse gas emissions: Australia is the highest per capita emitter of greenhouse gases and is getting worse. Australia's emissions per person have risen from 26.7 to 27.6 tonnes while the average for industrialised countries has fallen from 13.6 to 12.9 tonnes (Turton and Hamilton 2001 *Comprehensive emissions per capita for industrialised countries* The Australia Institute, Canberra). Transport accounts for 16% of Australia's emissions, mostly from road transport. Transport emissions are increasing rapidly, emissions in 1999 were 20.3% above those for 1990 (Australian Greenhouse Office 2001 *National Greenhouse Gas Inventory 1999 Factsheet: Transport*).

Oil dependence: Australia faces the likelihood of increased external imbalance and vulnerability as domestic oil production meets a declining share of domestic demand. Deterioration of the world oil supply situation is likely if production peaks as analysts predict, bringing increased fuel prices and the potential for supply shocks.

In their recent book *Back On Track* (2001), Philip Laird, Peter Newman, Mark Bachels and Jeffrey Kenworthy estimate that Australia's annual road deficit is at least \$8 billion – the difference between road provision and indirect costs and revenue from taxes, charges and

(11) Austroads 1999 *Australia Cycling 1999-2004: the national strategy* Austroads, Sydney.

(12) Potential for cycling trips from Socialdata 2000 *Perth Potential Analysis* Report for the WA Department of Transport.

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27th Australasian Transport Research Forum, Adelaide, 29 September – 1 October 2004

Paper title: Oil depletion: the crucial factor in transport planning

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Abstract (200 words):

As a result of steeply declining domestic oil production and forecasts of dwindling world supplies, Australia is very vulnerable to temporary and permanent oil shocks in the short, medium and long term. Transport planning priorities (both large scale planning and road design) must be changed dramatically to minimise the impacts of the coming oil shortages. The current reluctance of decision-makers even to consider oil depletion will rank high on the list of missed opportunities and 'intelligence failures'. There is a great deal that can be done to prepare for the likelihood of future oil shocks and hence to ameliorate the effects when (or if) they hit us. Current transport infrastructure projects, with only a few exceptions, are planned without any consideration for the effects on our oil dependence. A much more precautionary approach should be adopted now to reduce our vulnerability when oil supplies become limited, as appears to be almost certain within the service lifetime of most transport infrastructure projects. Many of the policy options to reduce fuel usage will in addition lead to healthier, happier and more equitable communities and improve local and global pollution levels. They will also require substantial changes in the way that transport is viewed by planners, engineers, politicians and the general public.

Australian oil production decline

Australia has been shielded from past oil shocks by our domestic oil production from Bass Strait. Hence, as a nation we have not learnt as much about oil conservation and transport planning as European countries, especially the Netherlands which radically changed its transport planning policy to reduce its oil dependence after the 1973 oil crisis.

However, Bass Strait production has been declining since 1985 and until now other fields have filled the production gap. Reliable recent predictions by Geoscience Australia and Woodside indicate that Australia's oil and condensate production will fall substantially in the next decade (Akehurst (2002), APPEA (2004)).

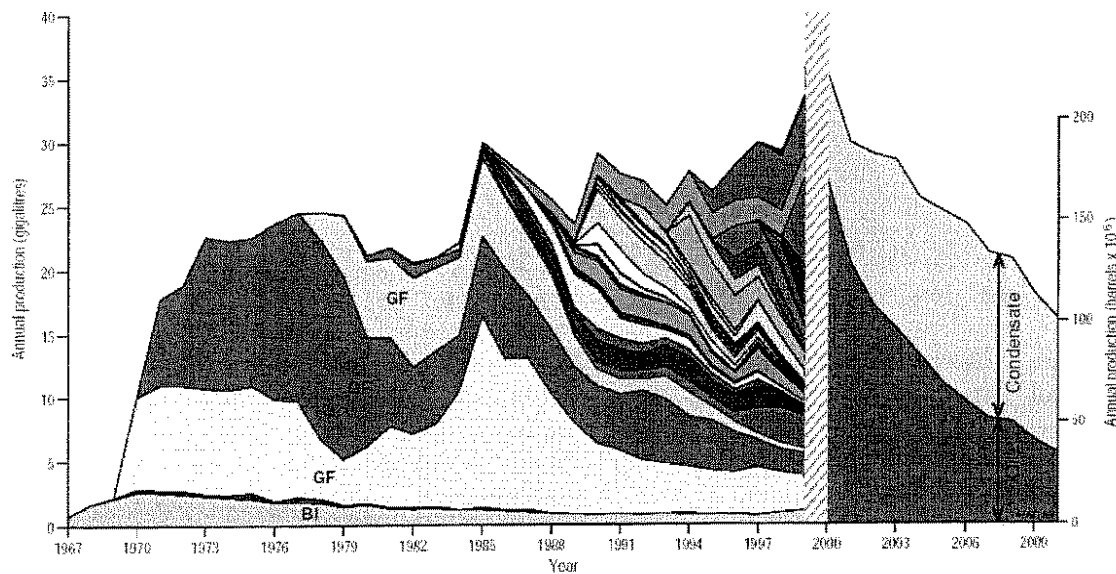


Figure 2. Oil and condensate production profiles of individual Australian fields, and the forecast cumulative production at 50% probability derived from industry data, Powell (2001), Akehurst (2002). BI denotes Barrow Island; GF denotes giant Gippsland Basin Fields.

The dominance of a few large fields, shown in Figure 2, is typical of oil regions. The giant fields are normally found first. An increasing discovery rate of usually progressively smaller fields is needed to keep production relatively constant as the giant fields decline. Then inability to keep finding adequate volumes in ever-smaller fields leads to an overall decline. Australia is now using three times as much oil as is being discovered, and this will lead to the forecast production decline as shown in the graph (Akehurst (2002)).

Australia's rapid domestic oil production decline is taking place not long before it is predicted that the overall world oil production will also commence to decline. As a result, Australia is becoming increasingly vulnerable to serious oil shortages, in the short term (within a year), in the medium term (within 5 years) and in the long term (within one or at most two decades). Self-sufficiency is expected to decline from an average of 80-90% over the past decade to about 20% by 2020 (APPEA (2004)).

World oil production decline predictions

A world-renowned US Geological Survey petroleum geologist, Les Magoon, visited Australia in November 2001 as the Distinguished Visiting Lecturer of the Petroleum Exploration Society of

Similar doubts about OPEC's overall reserves are also raised by Salameh (2004). In the case of Saudi Arabia, any substantial errors in reported reserve estimates are of very serious global significance. There is of course the complementary but lower probability that some reserves may have been understated, but most concern has been expressed about over-optimism.

International Workshops on Oil Depletion

Annual International Workshops on Oil Depletion are held in Europe by the Association for the Study of Peak Oil and Gas, ASPO. The most recent, and by far the largest and most prominent, was hosted in Berlin by the German Geological Survey, BGR in May 2004. Unfortunately, there has been no attendance at all from anyone from Australia professionally involved in transport, government or the oil industry. However, the Sustainable Transport Coalition has been represented at all three held so far. Papers and presentations are available at www.PeakOil.net. Oil depletion experts from the US, Europe, Russia and the Middle East gather to discuss the growing body of evidence that world oil production will reach a peak then decline relatively sharply within a decade or at most two. At the first workshop APSO also released the first edition of its "Statistical Review of World Oil and Gas", a nation-by-nation evaluation of reserves and production rates, based on the most reliable technical data available. The ASPO data differ substantially from those published in oil trade journals and by the IEA which have very serious commercial and political biases and inconsistencies. Evaluation of non-conventional oil is now included in the current predictions shown in Figure 3a. Non-conventional oil includes heavy oil (which needs to be heated to flow adequately), oil from deep water (>500 metres) and from polar regions and condensates from natural gas. These sources will in part offset the rate of decline of conventional oil after the "Big Rollover"

Presenters at the International Oil Depletion Workshops included Matthew Simmons, a prominent energy-sector investment banker from Houston who advises President Bush.

Simmons said, "I have studied the depletion issue intensely for too long now to have any remaining doubts as to the severity of the issue. But I am still amazed at the limited knowledge that exists, even in the U.S. or within our major oil and gas company's senior management about this topic and its dire consequences", (Simmons (2002))

"Most serious scientists worry that the world oil supplies will peak [and then decline]. Peaking of oil can not be predicted accurately, but the event will occur. Peaking turns out to only be clear through a 'rear-view mirror'. By then, an alternative or solution is too late. My analysis leads me to worry that peaking is at hand, not years away. If I am right, the unforeseen consequences are devastating. The facts are too serious to ignore." (Simmons (2003))

Dr Samsam Bakhtiari, of the National Iranian Oil Company, provided a pessimistic view of future oil supply decline and of its effects: -

"Seen from a Middle Eastern perspective, the present global oil situation can be summarised within five major and inescapable trends:

- *The world's super giant and giant oil fields are dying off;*
- *There are no more major frontier regions left to explore besides the earth's poles;*
- *Production of non-conventional crude oil has been initiated at great costs --- in Venezuela's Orinoco belt, Canada's Athabasca tar sands and ultra-deep waters;*
- *Even OPEC's oil production has its limits;*
- *No major primary energy rival can possibly take over from oil and gas in the medium term.*

Adding up these five trends, one can envision a global oil crunch at the horizon --- most probably within the present decade....."

The Guardian (2nd December 2003) "Bottom of the barrel – The world is running out of oil - so why do politicians refuse to talk about it?"

"Every generation has its taboo, and ours is this: that the resource upon which our lives have been built is running out. We don't talk about it because we cannot imagine it. This is a civilisation in denial."

Richard Miller, BP Exploration UK, wrote in a letter to the Oil & Gas Journal (12th January 2004) sharply refuting a statement from an extreme economic optimist (Maugeri, O&GJ, Dec 15th 2003) who had claimed "*.. just as the Stone Age did not end because of the scarcity of stones, the Oil Age will not end because of the scarcity of oil. Rather oil will inevitably be surpassed in convenience by a new source of energy in the future*".

Miller stated "*This is the classical economist's view: something will turn up, when the price of oil is high enough, because something always does. But there isn't anything conceivable that could replace conventional oil, in the same quantities or energy densities, at any meaningful price. We can't mine the oil sands in sufficient quantity because there isn't enough water to process them. We can't grow bio-fuels because there would be no land left to grow food. Solar, hydro, wind, and geothermal don't yield enough energy, hydrogen (from water) takes more energy to make than it can yield, and nuclear fission and fusion are presently off most political agenda. The oil consumed directly and indirectly by the average American is equivalent to the work output of 135 slaves, unfed, unclothed, unhoused, and paid \$2 a day between them. When oil gets too expensive, surviving Americans will still obtain energy from alternative sources, but in much smaller amounts and at much higher prices. Westerners will have to live with only a handful of slaves.*"

Christian Science Monitor, 29th January 2004 "Has Global Oil Production Peaked?";.

The question now making the rounds in energy circles: Has production already peaked?

West Australian, March 10th 2004 "End looms for the days of cheap oil"

"Oil companies are now raising their doubts. They voice it softly, but clearly they are starting to feel if they don't raise any doubts, the public will be hostile to them".

This well-researched long article was taken from an international newswire service. The fact that the West Australian was probably the only newspaper in Australia which ran the story may illustrate the reality of the community taboo against discussing oil depletion.

As production outside the Persian Gulf declines, the balance of oil power will shift more and more towards OPEC and the Middle East. Substantial short-term disruptions, for instance from a revolution in Saudi Arabia (Bauquis (2004)) and large market-force pressures in the medium-term are quite possible. The permanent decline phase will start once the Middle East production starts falling as forecast, possibly in about 2010 or so. Physical constraints in addition to market forces and geopolitical factors will then limit oil availability. Rising world demand, for instance from China and India, will add enormous pressures to the oil market. The past oil shocks have been predicted to be mere ripples compared to the changes which will probably occur in the next decade or two.

These reliable forecasts of declining domestic production and uncertain world supplies indicate that Australia is very vulnerable to "Oil Shocks" in the short term (2 months), medium term (2 years) and long term (within 1-2 decades).

The declines in Australian and world oil availability are likely to be much faster than any alternatives can be brought on stream in significant volume and much faster than the necessary structural and efficiency improvements can be made, unless extraordinary measures are taken very soon.

Empowering people in this way has resulted in sustained decreases of 8% to 19% in car-kms travelled. The oil saved by these voluntary travel pattern changes is very significant, and shows that reducing car-travel demand is more cost-effective than exploring for more oil.

Australia leads the world in the application of Individualised Marketing to make very significant reductions in car travel rates. Programmes have been completed or are underway in several states. WA has the most extensive record with a number of very successful and well documented programmes. The average reduction in car-kms travelled in the completed WA projects is 13% at a benefit:cost ratio of 30:1, far higher than those of most transport projects. Similar results have been obtained in Europe and the US, (Robinson (2004), Socialdata (2004)).

The TravelSmart Individualised Marketing programmes in WA have covered suburbs with some 158,000 people to date, and have resulted in the annual saving of some 115 million car-kms, or 11 million litres of petrol (John (2004), MacTiernan (2004)). Extrapolated to Australia's urban population, this would equate to about a thousand megalitres of oil saved each year. Globally, this level of travel reduction and mode shift would save each year oil amounting roughly to the annual production of Iraq, as an example.

Alternative Fuels

All alternative fuels to replace petrol and diesel have severe constraints to their introduction. Enormous volumes are required to replace a sizeable proportion of our current liquid fuel usage, and the timescale for their provision in these volumes is very short. For instance, diverting Australia's entire wheat crop to produce ethanol would replace less than 10% of our oil usage. Hydrogen is an energy carrier, not an energy source. It requires large amounts of energy for its manufacture and for its distribution. For the foreseeable future, the vast bulk of the world's hydrogen will continue to be made from oil and gas. The 'Hydrogen Economy' may well turn out to be just a pipe-dream like fusion power. Concentration on hydrogen diverts attention and resources from practical and immediate fuel conservation options. The most likely alternative for our current cheap plentiful oil will also be oil, but much more expensive and less plentiful oil.

Technological changes

It will be very risky indeed to rely on unproven technologies becoming available on such enormous scales within a decade or so, which is the timeframe likely to be required if the Big Rollover forecasts are accurate. There are around 14 million motor vehicles in Australia, and at only \$25,000 each, a fleet replacement exercise to change them to other technologies or other fuels would need the outlay of \$350,000 million, which would be diverted from other community and Government needs. Currently half the registered motor vehicles are more than ten years old, and 20% more than 20 years old. Normal fleet changeover rates are actually very slow. Half of today's new cars will still be on the roads in 20 years (BTRE (2002))

For instance, it has taken Australia almost two decades since 1985 to switch from leaded to unleaded petrol (Figure 6), a very much simpler technological change indeed than a conversion to fuel-cell cars, for instance. This change was mandatory for all new cars purchased from 1st January 1986.

the price of public transport while leaving that of petrol unchanged. There are massive Federal funds to build freeways, but no specific allocation at all to build cycleways. State Governments have high fixed "vehicle ownership" charges rather than "vehicle use" charges (especially for third party injury insurance). These mean that those frugal with car use are forced to subsidise the profligate users. Local Government ratepayers are forced to pay more for planning and engineering staff who live long distances away (because of high company car package costs) than they do for local staff who are of more value to residents because of their better local knowledge. The provision of salary-packaged vehicles mean that most decision-makers do not pay directly for their petrol and hence tend to have an automobile-dominated outlook. Even supermarket chains like Coles and Woolworths now force shoppers who use cars only rarely to subsidise the gas-guzzlers due to the inequitable petrol discount schemes, funded by increased supermarket food prices.

Like BP, the authors recommend starting with the low-hanging fruit, of simple good engineering and urban planning to end the addiction to continual expansion of facilities for motor vehicles. For example, the overall disjointed and low standard facilities for pedestrians and bicycle transport users are an indictment of past and current planning and engineering practices throughout Australia.

Transport researchers must look now towards evaluating the oil shortage scenarios outlined, so there is much more information on which to base the crucial decisions which must be made soon. The current National Oil Supply Emergency Committee rationing plans are just one minor example. These need a rigorous review and a much broader community input to make them far more equitable and suitable for long-lasting shortages. Making decisions by default, using the current business-as-usual forecasts will prove extremely costly to nations, communities and individuals.

There is enormous scope for economic gains and for the avoidance of serious losses if the community, the professions and governments can turn away from car-dominated thinking. Transport planners who take notice of the oil storms now appearing on the radar screens will be far better equipped to help the community survive the large changes that are very likely to sweep through Australia in the near future.

Acknowledgment

The authors would like to express special appreciation to Brian Fleay for his pioneering interest in oil depletion (eg Fleay (1995) (1998)). This paper is derived in part from the background paper prepared for the WA State Sustainability Strategy (Robinson, (2002)). The efforts and encouragement of Prof Peter Newman in this area amongst others should be recognised. Inspiration and assistance from members of the Sustainable Transport Coalition is also gratefully acknowledged.

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