Chapter Eight

Demand side responses

8.1 Demand side responses to reduce oil dependence have two main strands:

- improving the fuel-efficiency of vehicles; and
- reducing the demand for fossil-fuelled transport (or at least, restraining its growth). Under this heading, the main ideas mentioned in submissions were congestion charges to improve the efficiency of urban road use; encouraging walking, cycling and public transport in cities; promoting urban planning policies that reduce the need to use cars; and encouraging more use of railways for long-distance freight.[1]

8.2 Demand side responses can also serve other goals, such as controlling urban congestion and pollution, and reducing greenhouse gas emissions.

Increasing the fuel efficiency of vehicles

8.3 Fuel efficiency improvements are the most important demand side measure, because road transport dominates oil use. Modelling by ABARE suggests that more rapid uptake of fuel-efficient transport technologies, including more efficient engines and electric or hybrid electric vehicles, could significantly reduce the rate of growth of oil consumption in APEC countries.[2]

8.4 Since 1979 the fuel efficiency of light vehicle engines has improved significantly - from about 5 to 4 litres per 100km per vehicle tonne. However the efficiency of the Australian light vehicle fleet has improved more slowly, as consumers have moved to larger, more powerful vehicles. During the 1990s the fuel efficiency of passenger cars continued to improve slowly, but the fuel efficiency of the passenger fleet as a whole showed no further improvement, because of the increasing sales of heavier all terrain wagons (four wheel drives). As a proportion of new light vehicle sales these increased from below 3 per cent in 1979 to 15 per cent in 2001.[3] [4]

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1 For a concise discussion of these matters see also Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, pp 239-272.

2 Australian Government, *Securing Australia's Energy Future*, Dept of the Prime Minister and Cabinet, 2004, p. 137. ABARE, *Submission 166*, p. 9.

3 BTRE information sheet 18, *Fuel consumption by new passenger vehicles in Australia*, 2001.

8.5 The International Energy Agency, commenting on this trend, argues that 'governments can play an important role by introducing fuel efficiency regulations':

> Car manufacturers can use technological advances in vehicle design either to increase the power and performance of the vehicle or to improve its fuel efficiency. Often these aims conflict, with power improvements damaging fuel efficiency. Market forces often favour increased power. Governments can play an important role by introducing fuel efficiency regulations to force automakers to devote new technology to improving fuel efficiency.[5]

8.6 The Bureau of Transport and Regional Economics (BTRE), writing in 2002, warned that the growth of four wheel drive sales would continue to put upward pressure on fleet fuel consumption:

> Even if the ATW [all terrain wagon] share of new *sales* stabilises immediately at 15 per cent, the current share of ATWs in the *fleet* will continue to rise from the present 8 per cent, with consequent upwards pressure on fleet fuel consumption… The desire of an increasingly affluent population for vehicle characteristics that increase fuel consumption… has meant that potential reductions in fuel consumption made possible by technological advances have not been fully realised. This is a world-wide trend in the automobile sector, and it cautions against undue optimism about realising reductions in fuel use and emissions stemming from technological change.[6]

8.7 As reported in 2002 (which is the most recent BTRE information), the Australian National Average Fuel Consumption (NAFC) of new passenger cars in 2001 was 8.28 litres/100km; for all terrain wagons about 11 litres/100km, and for the light vehicle fleet as a whole about 9 litres/100km.[7]

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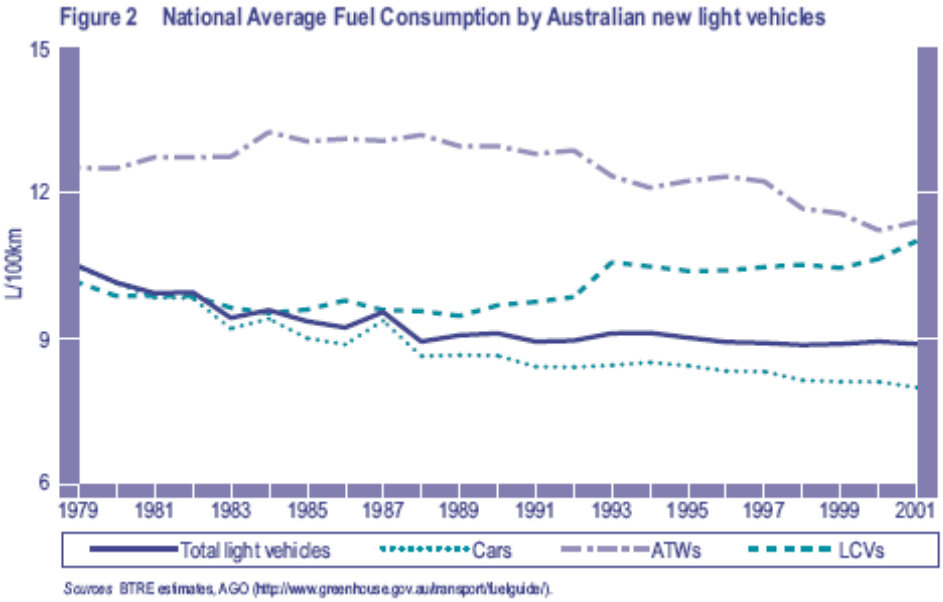
4 This mirrors experience in the USA, where there is a mandatory corporate average fuel economy (CAFE) standard for passenger cars, and a lower standard for 'light trucks' (sports utility vehicles). As the market penetration of light trucks for passenger use has grown, the fuel efficiency of the US light vehicle fleet as a whole has worsened steadily since 1988, and now stands at about 24 miles per gallon (9.8 litres per 100 km). Pew Centre on Global Climate Change, *Comparison of Passenger Vehicle Fuel Economy and Greenhouse Gas Emission Standards Around the World*, 2004, p. 7.

5 International Energy Agency, *World Energy Outlook 2006,* p. 226.

6 BTRE information sheet 18, *Fuel consumption by new passenger vehicles in Australia*, 2001.

7 BTRE information sheet 18, *Fuel consumption by new passenger vehicles in Australia*, 2001. Australian Automobile Association, *Submission 151,* p. 10.

Figure 8.1 – Fuel consumption of Australian new light vehicles
ATW = all terrain wagon. LCV = light commercial vehicle



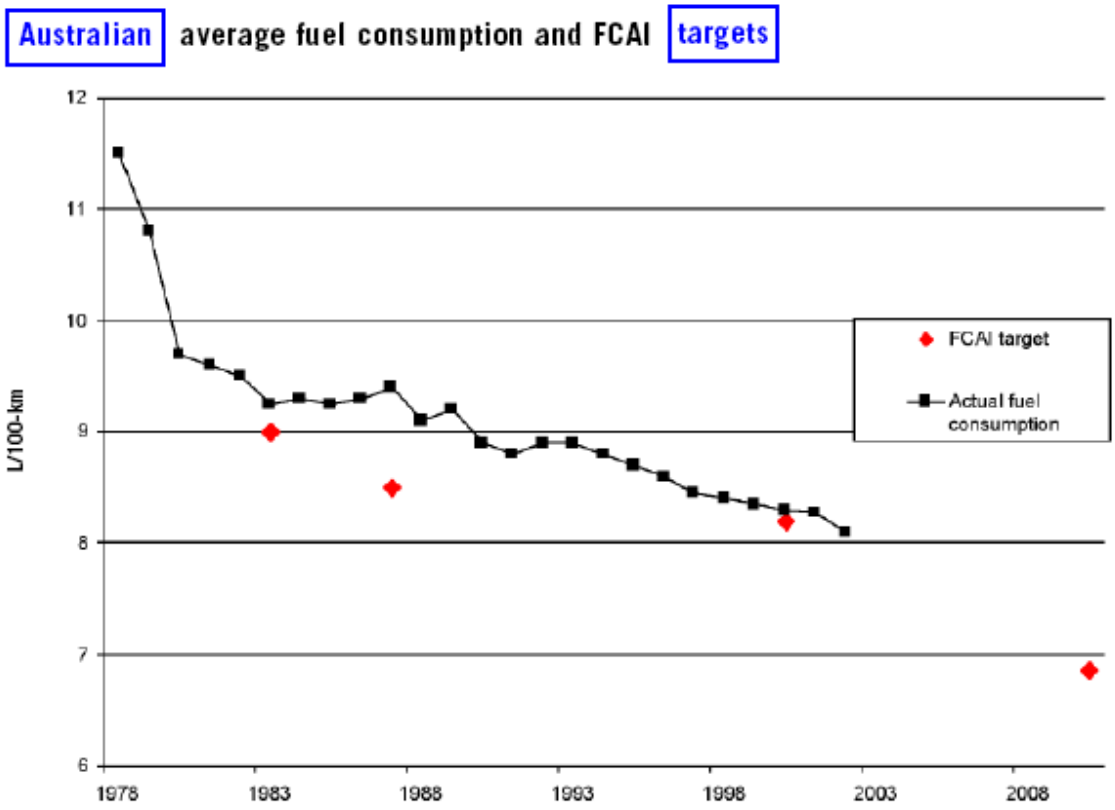
Source: Bureau of Transport and Regional Economics, information sheet 18, *Fuel consumption by new passenger vehicles in Australia*, 2002

FCAI[8] code on reducing fuel consumption of new passenger cars

8.8 Over the years there have been several voluntary industry codes of practices aiming to reduce fuel consumption of new passenger cars. Codes in operation from 1978 to 1987 and from 1996 to 2001 achieved significant improvements, although they did not meet their targets:

8 Federal Chamber of Automotive Industries

Figure 8.2 – Fuel consumption of Australian new passenger cars, and FCAI targets

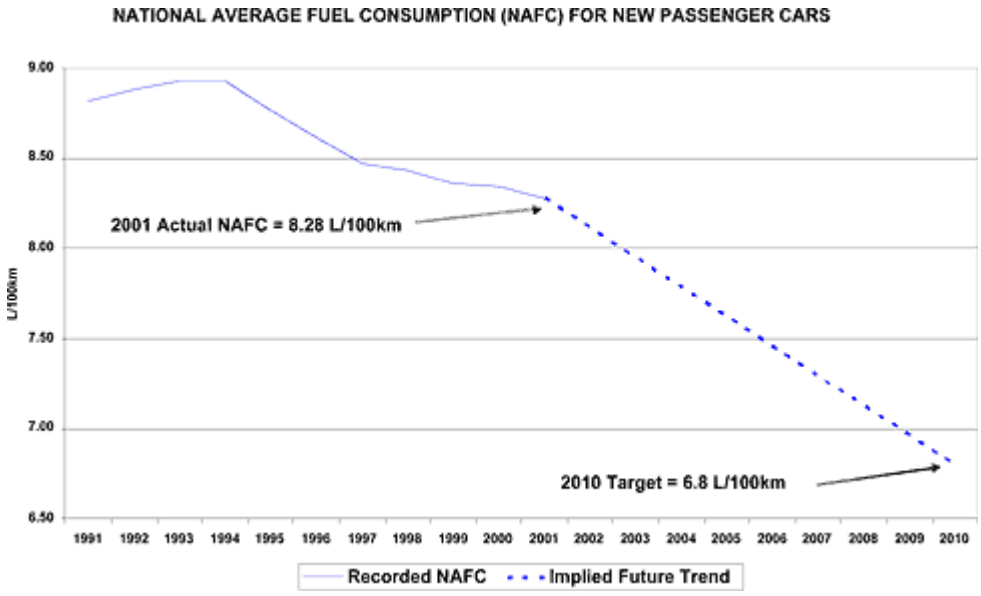


Source: Pew Centre on Global Climate Change, *Comparison of Passenger Vehicle Fuel Economy and Greenhouse Gas Emission Standards Around the World*, 2004

8.9 The current voluntary code, agreed between government and the Federal Chamber of Automotive Industries (FCAI) in 2003, calls on FCAI members to improve the national average fuel consumption of new passenger cars to a target of 6.8 litres per 100 km by 2010 'with the objective of continuing improvement in the environmental performance of the Australian automotive industry.'[9] This would be a reduction of 18 per cent over the decade. It would require a significant improvement on the trend of the decade before 2001.

9 Federal Chamber of Automotive Industries, *Voluntary Code of Practice - Reducing the Fuel Consumption of New Light Vehicles*, 15 April 2003.

Figure 8.3 – National average fuel consumption of new passenger cars in Australia, with future trend implied by FCAI target



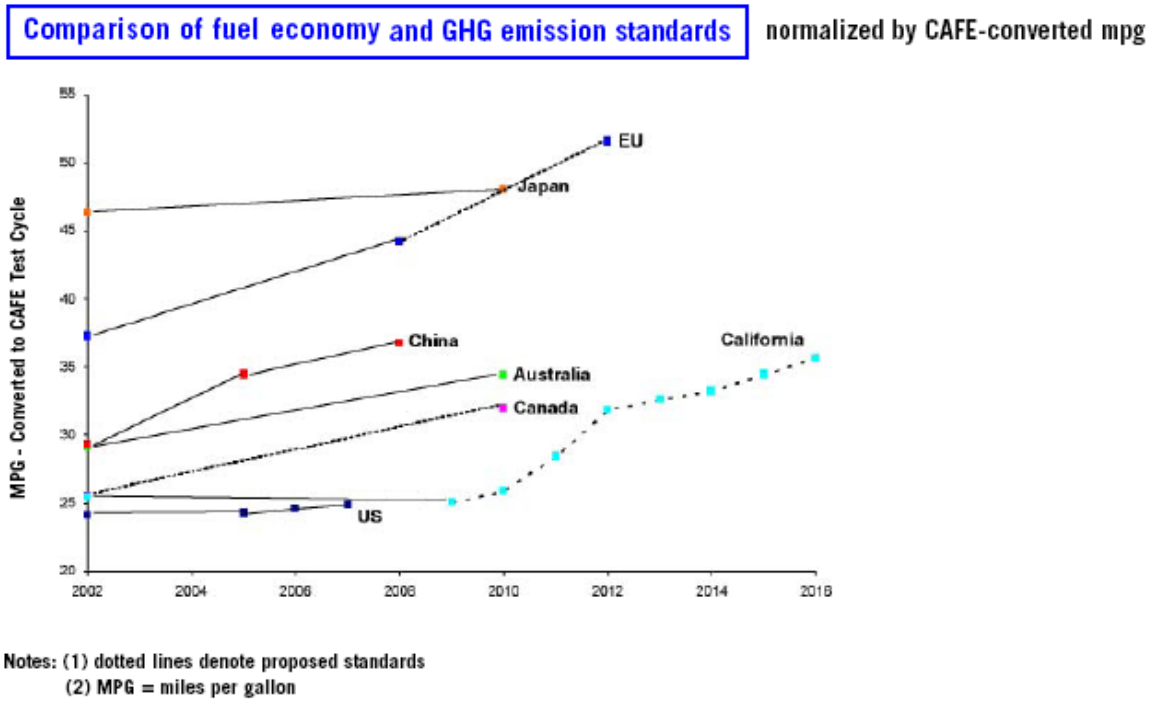
Source: Federal Chamber of Automotive Industries, *New target for reduced fuel consumption*, media release 15 April 2003 at

http://www.fcai.com.au/media/2003/04/00000011.html

8.10 The code is more demanding than standards in the USA and Canada, but less demanding than those in China, Japan or the European Union:[10]

10 Standards are mandatory in the United States, California, China and Japan, and voluntary in the European Union, Canada and Australia. The US Corporate Average Fuel Economy standards, though mandatory, are not particularly demanding: 27.5 miles per gallon (8.5 litres per 100km) for passenger cars, and 22.2 miles per gallon (10.6 litres per 100km) from 2007 for light trucks. Pew Centre on Global Climate Change, *Comparison of Passenger Vehicle Fuel Economy and Greenhouse Gas Emission Standards Around the World*, 2004, p. 6. For more discussion and comparisons, see International Energy Agency, *World Energy Outlook 2006*, p. 226ff, and Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 246.

Figure 8.4 – Comparison of fuel economy standards for new passenger vehicles.



Source: Pew Centre on Global Climate Change, *Comparison of Passenger Vehicle Fuel Economy and Greenhouse Gas Emission Standards Around the World*, 2004

8.11 The code applies to new passenger cars, not to other light vehicles such as four wheel drives. Thus it does not touch the problem of efficiency improvements being counteracted by the rising market share of heavier vehicles.[11] When the voluntary code was established in 2003 the FCAI indicated it would develop appropriate targets for other categories of light vehicles. It appears that this is still under negotiation with government. It is also intended that an updated code will express the target in terms of greenhouse gas emissions rather than fuel consumption. According to the Australian Greenhouse Office updating the code is proving 'fairly complicated'.[12]

8.12 It is unclear what progress has been made to achieve the code's target. The Australian Automobile Association is concerned that 'options for improving fuel efficiency do not seem to be adequately taken up, particularly by car manufacturers':

> Although the Code commits the FCAI member companies to report annually on progress with the target, the figures are not readily available

11 There is some evidence that the higher petrol prices of the last two years have turned consumers back towards smaller cars: Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 249. Federal Chamber of Automotive Industries, *Small cars drive half yearly motor vehicle sales,* media release 5 July 2006.

12 *Committee Hansard,* 11 August 2006, p. 55. (Mr G. McGlynn, Australian Greenhouse Office)

> and so it is difficult to ascertain what improvements have taken place since 2003.[13]

8.13 According to the Australian Greenhouse Office 'at this stage it is really impossible to measure':

> It is a target for 2010. The nature of vehicle fuel efficiency changes is such that you do not see steady progress; you tend to see jumps here and there when new models are introduced. So it is not something you can easily monitor on a year by year basis.[14]

8.14 It should also be noted that expressing the trend in fuel economy in terms of fuel consumption per vehicle kilometre overstates the benefits. This is because an improvement in fuel economy will reduce the cost of driving, and that will encourage more driving. This 'rebound effect' is said to be typically 20-30 per cent, reflecting the elasticity of demand for travel with respect to fuel price. At that rate a 10 per cent improvement in fuel efficiency per vehicle kilometre would cause a 7-8 per cent reduction in fuel consumption and a 2-3 per cent increase in distance travelled. The increased travel may have other costs, such as congestion, which should be considered.[15]

8.15 The Productivity Commission has argued that fleet-wide fuel efficiency targets that go much beyond what the market would deliver would not be privately cost effective, in the sense that consumers would value the fuel savings less than the associated costs and constraints on vehicle choice.[16] The implication is that such measures need to be justified by perceived public benefits of reducing long term oil use and greenhouse emissions. This appears to be the rationale for the present voluntary code, which speaks of 'improved environmental outcomes through the progressive reduction in the carbon dioxide emissions and fuel consumption of new passenger cars and other light vehicles.' [17]

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13 Australian Automobile Association, *Submission 151*, p. 10. Mr L. Mackintosh (AAA), *Committee Hansard,* 18 August 2006, p. 65.

14 *Committee Hansard,* 11 August 2006, p. 55. (Mr G. McGlynn, Australian Greenhouse Office)

15 International Energy Agency, *World Energy Outlook 2006,* p. 228. Victoria Transport Policy Institute, *Rebound effects - implications for transport planning*, at http://www.vtpi.org/tdm/tdm64.htm

The Productivity Commission notes research suggesting that a 10 per cent increase in fuel efficiency leads to a 2 per cent increase in distance travelled: *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 248.

16 Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 248.

17 FCAI, *Voluntary Code of Practice – Reducing the Fuel Consumption of New Light Vehicles*, 2003, clause 2.

Other fuel efficiency measures

8.16 Other suggestions made in submissions to improve fuel efficiency of cars included:

- measures to encourage smaller and hybrid vehicles in government and similar fleets;[18]
- measures to encourage diesel cars, which are more expensive than similar petrol cars but much more fuel efficient (they use 30-50 per cent less fuel than petrol cars of similar power);[19]
- measures to encourage smaller cars, for example by adjusting registration fees to favour them;
- removing the concessional tariff treatment of imported four wheel drives;[20] and
- increasing the fuel excise as an environmental measure. This could be coupled with lower registration charges to be cost neutral overall. It would reduce the flagfall cost of car ownership but increase the marginal cost of a trip, and so would be expected to encourage more fuel efficient cars and reduce the kilometres driven.

8.17 A particular point of interest was the Reva electric car, which is now on sale in several countries. The Reva is a 13 kilowatt powered car with a top speed of 65kph. A sample is in Australia for safety testing. The Department of Transport and Regional Services advised that the States, when asked, did not support registering the Reva, because of concerns about safety.[21]

8.18 It is also sometimes suggested that improving roads to relieve urban traffic congestion will improve overall fuel efficiency. Fuel consumption per kilometre is up to twice that in congested conditions as in free-flowing traffic.[22]

8.19 The committee notes the work of the Ministerial Council on Energy in promoting the National Framework for Energy Efficiency from 2004. Stage One of the NFEE was focussed on stationary energy. The Ministerial Council in October

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18 This has been done in Queensland and Western Australia. Queensland Government, *Submission 155*, p. 5. Mr G. Head (WA Department for Planning and Infrastructure), *Committee Hansard,* 11 April 2006, pp 3-4.

19 SASOL Chevron, *Submission 54*, Appendix C.

20 Imported new passengers cars attract a tariff of 10 per cent; four wheel drives, 5 per cent. This anomaly will end in 2010 when the tariff on cars falls to 5 per cent.

21 Mr P. Robertson (DOTARS), *Committee Hansard,* 18 August 2006, p. 9. Hon. J. Lloyd, *Reva vehicle must comply with safety standards first,* media release 11 October 2006.

22 Bureau of Transport and Regional Economics, *Urban congestion - the implications for greenhouse gas emissions*, information sheet 16, 2000.

2006 resolved to consider new energy efficiency measures.[23] As well, COAG has asked the Australian Transport Council (council of transport ministers) and the Environment Protection and Heritage Council (council of environment or related ministers), to report by the end of 2006 on incentives to promote more fuel efficient vehicles and strategies for demand management including increasing the use of public transport.[24]

Comment

8.20 Measures to improve the fuel efficiency of vehicles should be supported. The committee is concerned at the slow rate of improvement in the fuel efficiency of the light vehicle fleet, and the apparent uncertainty about what has been achieved to date by the current industry voluntary code.

Recommendation 6

8.21 The committee recommends that the Government, in consultation with the car industry, investigate and report on trends in the fuel efficiency of the light vehicle fleet and progress towards the 2010 target for the fuel efficiency of new passenger cars. If progress under the present voluntary code seems unlikely to meet the target, other measures should be considered, including incentives to favour more fuel efficient cars; or a mandatory code.

8.22 If progress under the present voluntary code seems unlikely to meet the target, other measures should be considered, including incentives to favour smaller or more efficient cars (for example, by adjusting registration charges); or a mandatory code.

8.23 Upgrading the national car fleet would be facilitated by government mandating the use of fuel efficient and hybrid vehicles in the government car fleet, which traditionally feeds into the taxi and second-hand car market.

8.24 Any proposal to increase fuel excise as an environmental measure would have to consider the distributional effects. People in the outer suburbs of cities and in rural and regional areas would be most affected. These people spend a relatively high proportion of their income on transport already, and for most purposes have no public transport alternatives. Positive measures to provide more alternatives to the use of cars would probably be more politically acceptable.

8.25 The committee comments on the proposition that building roads to reduce urban congestion improves fuel efficiency: this may be so in the short term, considered per vehicle kilometre. But it is not necessarily so in the longer term, because building roads also encourages more traffic, and entrenches patterns of urban development that make high car use necessary. What the overall result of these

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23 Ministerial Council on Energy, communiqué 27 October 2006.

24 Department of Environment and Heritage, *Submission* 171, p. 7. Australian Transport Council, communiqué 2 June 2006.

conflicting tendencies is, is hotly debated by transport planners and public transport advocates. The committee notes that the Council of Australian Governments (COAG) is now investigating options for managing urban transport congestion.[25] The committee trusts that COAG's deliberations will take account of this point.

Reforming urban road use charges: congestion charges

8.26 Congestion charging has been discussed more and more in recent years as a way of making more efficient use of the road system.

8.27 A motorist entering a congested road suffers delay, but also causes delay to others. A cost that a person imposes on others without paying for is an 'external cost.' If motorists are not required to pay for the costs they impose on others, their behaviour will not respond to the full cost, and economically inefficient overuse of the road will result. The resulting congestion, as well as causing delay to all motorists, increases fuel consumption as noted above.

8.28 Other external costs of car use are noise, pollution and greenhouse gas emissions, some accident costs and, arguably, the detrimental health effects of a too car-dependent lifestyle reducing physical exercise.[26] The costs associated with these detriments are significant. The Bureau of Transport and Regional Economics (BTRE) has estimated that the cost of congestion in major cities is $12.8 billion per year and the cost of the health effects of motor vehicle pollution is $2.6 billion per year (central estimate of total costs - the proportion which is an externality is not stated). [27]

8.29 Tailored road use charges are suggested as a way of reducing the external congestion cost. Motorists would be charged to use roads at the most congested times and places. This can be done by either a cordon charge in central areas (as in London and Stockholm) or by electronic tolling. Tolls can vary with the time of day. Those who value the use of the road less than the charge would adjust their behaviour by travelling less often, or at other times, or switching to public transport. Those who value the use more would have a less congested trip. The overall result for community welfare is positive.[28]

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25 Council of Australian Governments, communiqué 10 February 2006.

26 The external cost of an individual's ill health is publicly funded health care costs. A proportion of accident costs are internalised, and a proportion are funded by the public health system.

27 BTRE, *Urban Congestion - the Implications for Greenhouse Gas Emissions*, information sheet 16, 2000. *Health Impacts of Transport Emissions in Australia: Economic Costs*, working paper 63, 2005, pp 14-15.

28 To gain the economic benefit it is important that the charge is actually tailored to target only congested times and places. A flat rate city wide 'road use charge' is not a congestion charge. For further discussion see Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 251ff.

8.30 According to the BTRE, among the possible types of road use charges, congestion charges have the best potential for reducing fuel consumption. The BTRE has estimated that levying optimal road user charges in major Australian cities could reduce peak hour travel by 20 per cent, overall travel time by 40 per cent, and total traffic fuel consumption by close to 30 per cent.[29]

8.31 While the economic case for congestion charging is strong, politically it has been very difficult to implement, because of the perception that it is 'yet another tax on motorists'.[30] One review of 25 examples around the world found that 'the common experience was that pricing was only acceptable if this objective could be seen as the solution to an already accepted problem, and a sufficiently widespread acceptance that other existing policies are not capable of solving it.' To win support for a proposal it was very important that the revenue was hypothecated to transport improvements. It was found that channelling revenue to public transport in particular increases public and political acceptance.[31]

8.32 The Australian Automobile Association supports congestion charging for the sake of the economic benefits, and supports using part of the revenue to improve public transport: 'In many instances… it would make the motorist better off if they had a viable public transport system.' The Royal Automobile Club of Queensland recently proposed a scheme for Brisbane.[32]

8.33 The Productivity Commission, in a recent report on energy efficiency, noted that congestion charging could deliver significant economic benefits, including improved fuel efficiency. It recommended further investigation of congestion charging. The Government response supported further investigation of congestion charging, noting that 'effective congestion management requires a range of complementary measures.' The Council of Australian Governments (COAG) is now investigating options for managing urban congestion.[33]

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29 Bureau of Transport and Regional Economics, *Greenhouse Policy Options for Transport,* report 105, 2002, p. xv. Bureau of Transport and Communications Economics [predecessor of the BTRE], *Traffic Congestion and Road User Charges in Australian Capital Cities,* report 92, 1996.

30 For example, in response to a recent congestion charging proposal by the Royal Automobile Club of Queensland, the Queensland Transport and Main Roads Minister, Mr Lucas said, 'The Beattie government is not considering introducing congestion charging on Brisbane roads - it's a toll road by stealth.' www.theage.com.au 3 September 2006.

31 UK Commission for Integrated Transport, *CfIT's world review of road pricing phase 1 - lessons for the UK*, n.d. at http://www.cfit.gov.uk/docs/2006/wrrp1/index.htm

32 *Committee Hansard* 18 August 2006, p.78 (Mr J. Metcalfe). Willett K, (RACQ), *The Truth about Brisbane's Road: Stuck in Traffic and Stuck for Solutions,* 17 August 2006.

33 Productivity Commission, *The Private Cost-Effectiveness of Improving Energy Efficiency*, 2005, p. xlii, p. 257, recommendation 11.1. Government response, February 2006.

Comment

8.34 The object of a congestion charge is to reduce congestion. It is noteworthy that at least two peak motoring organisations now support this (Australian Automobile Association and RACQ). There are now a number of successful examples around the world to look to. The committee suggests that Australian governments should take a more active role in educating the public about the benefits of congestion charges. To make the idea more politically acceptable it is desirable to hypothecate the revenue to transport improvements. This should include improving public transport services, so that more motorists have alternatives to their cars.

Recommendation 7

8.35 The Committee recommends that Australian governments investigate the advantages and disadvantages of congestion charges, noting that the idea may be more politically acceptable if revenue is hypothecated to public transport improvements (as has been done in London, for example).[34]

Encouraging walking, cycling and public transport in cities

8.36 Many submissions argued for increased use of walking, cycling and public transport in cities, as a way of reducing transport fuel use, or at least restraining its growth.

Public transport

8.37 In Australian cities typically 75-90 per cent of all trips are by car, 5-10 per cent by public transport, and the rest by cycling or walking.[35] In the last 20 years public transport use has increased slowly, broadly in line with population growth, but public transport use as a proportion of all trips has been flat or declining slightly as car use increases faster.[36] A major reason for this is that as cities have grown outwards a greater proportion of people live in fringe areas that require more travel and are poorly designed for public transport. Other reasons are the declining share of commuting trips relative to other trips; rising incomes and the falling cost of car travel; more flexible working hours; and increased workforce participation by women with resulting increase in multi-purpose trips.[37]

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34 See Mayor of London's transport strategy, available at http://www.london.gov.uk/mayor/strategies/transport/index.jsp

35 The public transport share is usually somewhat higher in peak hours, and for travel to Central Business Districts.

36 Australasian Railway Association, personal communication, August 2006, based on research in progress.

37 Bureau of Transport and Regional Economics, *Greenhouse Policy Options for Transport,* report 105, 2002, p. xii.

8.38 Some increase in public transport use in the last year has been reported, presumably as a result of petrol price rises. However such increases are mostly quite small in percentage terms.[38] Another line of reporting stresses that most motorists have no alternative but to use their cars.

8.39 Ambitious goals for increasing the public transport mode share are commonly seen in official plans.[39] In some cities there has been significant investment in this: for example, Perth has electrified and extended its suburban rail network over the last 15 years, leading to a three-fold increase in use. The goals of these policies seem to be to control congestion and pollution, to give people more transport options, and to improve the opportunities of people without cars. Reducing oil dependency would be an additional benefit.

8.40 Many submissions urged the Commonwealth to be more involved in improving urban public transport infrastructure. They pointed out that there appears to be strong community support for more investment in public transport, and that in many other countries federal governments do contribute to urban public transport infrastructure. For example, in the USA the Federal Government is a significant provider of public transport funds and has recently announced an extension of its National Transportation Funding Program. Similarly, Canada has introduced a federal funding program for urban public transport infrastructure and in many parts of Europe (for example France and Germany) national governments are major financial contributors to public transport provision.[40]

8.41 The Bus Industry Confederation suggested that the Commonwealth should 'kick start' change by establishing a Sustainable Infrastructure Fund within Auslink programs. Grants to states and local government would require them to show that projects met sustainability objectives and were the outcome of an integrated landuse/transport planning process. Similarly the International Association of Public Transport proposed a Sustainable Transport Fund with a Commonwealth grant of $500 million per year initially and matching funds from state and local government.[41]

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38 For example, Hon. J. Watkins (NSW Minister for Transport), *Public bus patronage grows by 60,000 passengers a week*, media release 23 May 2006. This is a year on year increase of about 1.7 per cent.

39 For example, there are official goals to increase the public transport mode share from 7% to 10.5% in South East Queensland by 2011 *(Transport 2007);* from 9% to 20% of motorised trips (thus about 15% of all trips) in Melbourne by 2020 *(Melbourne 2030)*; to reduce car-as-driver trips in Perth by one third by 2029 (*Perth Metropolitan Transport Strategy 1995-2029*); and to increase the proportion of peak hour trips by public transport to 25% in Sydney (*A New Direction for NSW - State Plan*, 2006).

40 International Association of Public Transport, *Submission 32*, p. 31. Prof. P. Newman, *Committee Hansard,* 12 April 2006, p. 43. Municipal Association of Victoria, *Submission 124*, p. 6.

41 Bus Industry Confederation, *Submission 129*, p. 16. International Association of Public Transport, *Submission 32*, pp 24-5.

8.42 The Commonwealth's current policy is that public transport is the responsibility of the States.[42] However the Commonwealth, through the Greenhouse Gas Abatement Programme, has supported 'Travelsmart' projects, which aim to reduce car use by direct approach to targeted households (for example, to provide information about public transport services). Larger projects routinely show decreases in car use of 4-15 per cent, and increased walking, cycling and public transport use. The Queensland Government noted that Commonwealth funding for Travelsmart ends in mid 2007, and urged that it should continue.[43]

Cycling and walking

8.43 In Australian cities 30 per cent of car trips are less than 3km long, and half are less than 5km. The Bicycle Federation of Australia argued that many of these trips would be suitable for cycling, if the infrastructure was there to allow it to be done safely.[44] At present, although bicycle ownership is high (from 29 per 100 people in Sydney to 65 per 100 in Canberra), very few city people use a bicycle on an average day (from 1 per cent in Sydney to 4 per cent in Perth), and only 1-2 per cent of work trips are by bicycle.[45] It is estimated that currently about $100 million a year is spent on cycling infrastructure and promotion. This is about 2 per cent of the $5 billion a year that is spent on roads.[46]

8.44 The Australian National Cycling Strategy 2005 was developed by the Australian Bicycle Council (an association of relevant government agencies such as road and traffic authorities and other stakeholders). It aims to encourage cycling with policies such as:

- cycling should be an essential consideration in integrated land use and transport planning;
- suitable infrastructure and facilities should be provided; and
- cycling should be supported and promoted.

8.45 The strategy is an 'agreement to cooperate', and is not prescriptive. It leaves it to the member governments to decide what targets they will establish for increasing cycling.[47]

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42 Department of Transport and Regional Services, *Auslink White Paper*, 2004, p. 9.

43 Department of Environment and Heritage/ Australian Greenhouse Office, *Evaluation of Australian Travelsmart Projects,* 2005, p. 5. Queensland Government, *Submission 155,* p. 4. See also WA Department for Planning and Infrastructure, attachment.

44 Mr P. Strang (Bicycle Federation of Australia), *Committee Hansard,* 12 May 2006, p. 89. Mr E. Fishman (Institute for Sensible Transport), *Committee Hansard,* 12 May 2006, p. 93.

45 Australian Bicycle Council, *Australian Cycling - Bicycle Ownership, Use and Demographics*, 2004, pp 5-7.

46 Austroads, *The Australian National Cycling Strategy 2005-2010,* 2005, p. 3.

47 Austroads, *The Australian National Cycling Strategy 2005-2010,* 2005, p. 4 and pp 14-15.

8.46 It was argued that electric bikes would greatly improve the usefulness of cycling - the ASPO Australia Active Transport Working Group argued that these should be encouraged by setting a 300 watt limit for unregistered electric bikes, instead of the 200 watt limit which now applies.[48]

8.47 The Walking WA Committee argued that 'creating activity centres where employment, schools, recreation and shopping are within a short radius would reduce car use…'

> Government should put in more funding in the provision of a good pedestrian network system as local streets and paths have been identified as the most frequently used facilities. A similar program such as the "Black Spot" program for cars have been provided by the Federal Government, a program "Footpath black spot" program should be created to enable more footpaths to be built and maintained.[49]

Comment

8.48 Studies suggest that overall the potential fuel saved from promoting walking, cycling and public transport, with realistic assumptions about how much behavioural change could be achieved, is relatively small compared with the saving from improving the fuel efficiency of vehicles.[50] However more walking, cycling and public transport use is still a worthwhile goal for a number of reasons - for example to reduce congestion and pollution; to promote healthy lifestyles; and to reduce the disabilities suffered by people without cars (since more public transport use would make better services more viable). This applies regardless of predictions about the oil future. If there is a long term rise in the price of oil, it will be all the more necessary.

8.49 It is often said that it is too hard to get Australians out of their cars.[51] Others argue that the real problem is that people have no choice:

> There is no real relationship between wealth and car use. People use cars because they have to. Car dependence has become a dominant phenomenon. There is a lot of nonsense about how you will never get people out of their cars. You will not get them out of their cars unless you give them a better option, and then they will.[52]

8.50 The committee agrees that, whatever the reasons for people's travel behaviour, changing it is a challenging goal. However this does not mean it should not be

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48 ASPO Australia Active Transport Working Group, *Submission 136,* p. 8.

49 Walking WA Committee, *Submission 109,* p. 4.

50 Monash Energy Holdings, *Submission 58,* p. 17. Bureau of Transport and Regional Economics, *Greenhouse Policy Options for Transport,* report 105, p. 20. International Energy Agency, *World Energy Outlook 2006*, p. 224.

51 For example, Australian Automobile Association: 'Trying to get motorists out of their cars as an option for reducing transport fuel demand is unrealistic'. *Submission 151*, p. 7.

52 Prof. P. Newman, *Committee Hansard,* 12 April 2006, pp 50-51.

attempted. It a clearly a long term project. Change may be slow, but the important thing is to set the trend to reduce car-dependence into the long term.

8.51 Efficient transport investment requires better road pricing. This will probably mean significant new charges for using urban roads at the most congested times and places, as discussed above (paragraph 8.26ff). This is unlikely to be politically acceptable without serious improvement to public transport services, so that more motorists have other choices.

8.52 Serious improvements to public transport infrastructure - particularly rail extensions - are costly, tend to come in large, indivisible packages, and have very long payback periods. They are hard to program within state-sized budgets, and easy to shelve in favour of more incremental roadworks. However this outcome is not necessarily optimal in the long term.

8.53 The committee does not suggest that the Commonwealth should take over the states' basic responsibility to operate public transport services. However there may be a case for Commonwealth assistance to major projects such as rail extensions which are unlikely to happen, or unlikely to happen soon enough, without the involvement of the bigger budget which the Commonwealth commands.

8.54 The Committee recognises the need for more investment in mass transport and urges COAG to take this up as a national infrastructure priority.

8.55 The evaluation of Travelsmart projects suggests that they have significant benefits and can be a very cost-effective way of encouraging public transport use.

Recommendation 8

8.56 The committee recommends that Commonwealth support for Travelsmart projects be maintained beyond the currently planned termination date.

Integrating transport planning and land use planning to reduce car use

8.57 Car-dominated transport habits reflect patterns of urban development which make high car use necessary. Vast areas of post World War II suburbia have been designed on the assumption that most travel would be by car, and with the aim of making this easier. The effect has been to make travel in any other way harder, as activity centres disperse to sites distant from the public transport network, and the environment for pedestrians and cyclists is degraded by traffic.

8.58 In these areas existing public transport routes do not serve many travel needs, and services are poor. These services cannot attract people who have any other option: they mostly function as welfare for people without cars, with a very low proportion of total trips (less than 5 per cent).

8.59 The forces that drive high car use are still at work, in spite of the fact that urban plans now universally acknowledge the need to reduce it. According to Prof.

Newman, recent capital city strategic plans 'have recognized that there is a need to reduce automobile dependence and save on oil, [but] have not intervened in any radical way to stop oil-consuming behaviours.'[53] WSROC noted that 'In the last 20 years in western Sydney only 18 per cent of all new jobs have been located in centres.'[54] Wyndham Council in western Melbourne noted the targeted urban infill to restrain fringe development 'is simply not happening'.[55] The Public Transport Users Association criticised factory outlet developments approved by the Commonwealth on airport land, made possible by the fact that the land is exempt from normal planning controls:

> As you drive out to the airport I want you to just look at the discount or factory outlets at Essendon airport on Commonwealth land that are pretty much inaccessible by anything other than car or aeroplane.[56]

8.60 Development control is divided between State and local governments, and subject to the pressure of the property development industry representing market forces. This makes it difficult to follow through any strategic plan in the long term:

> Planners do not plan cities. Someone plans the subdivisions—usually the developers—somebody else plans the water supply, somebody else plans the electricity and, if you are lucky, somebody plans the transport. But they do not do it in concert; they do it independently. So industry develops where the land is cheap and where the services can be provided by somebody with very little cost to the developer… It goes in a circle and creates dysfunctional cities in the passenger transport area.[57]

8.61 Submissions stressed that turning around this situation requires better public transport services **and** planning policies to shape urban development so that public transport networks can work efficiently and attract more 'choice' customers:

> Travel behaviour and transport demand are directly linked to land use. Those planning for land use must consider how people using a particular space will travel around and through that space, as those decisions will affect how people choose to travel in future.[58]

8.62 Planning to reduce car-dependence means, for example:

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53 Prof. P. Newman, *Submission 11*, p. 5.

54 Mrs S. Fingland (Western Sydney Regional Organisation of Councils), *Committee Hansard,* 9 June 2006, p. 22.

55 Mr I. Robins (Wyndham City Council), *Committee Hansard,* 29 June 2006, p. 65.

56 Mr C. Tampion (Public Transport Users Association), *Committee Hansard,* 29 June 2006, p. 82.

57 Mr A. Honan (Railway Technical Society of Australia), *Committee Hansard,* 30 June 2006, p. 17.

58 Municipal Association of Victoria, *Submission 124*, p. 4.

- encouraging commerce and employment to locate at strongly planned regional centres, so that public transport networks have somewhere to focus on;
- reserving new corridors for fast public transport early in the planning of greenfields developments;
- new subdivisions and activity centres to be planned so that buses can be routed efficiently; and
- design principles to give high priority to a quality environment for pedestrians and cyclists.

8.63 Greenfields developments should be designed with high priority to creating an efficient public transport route network. Services should be provided from the outset, rather than being retrofitted years later, after the new residents have established car-dependent habits.

8.64 Similarly, design principles to encourage walking and cycling must be in place from the outset - for example, cycle-friendly road design, permeable street layouts which do not force circuitous trips, and suitably placed local and neighbourhood centres to promote walking and cycling for trips within the neighbourhood. Traffic calming and lowered speed limits on local roads can promote safe cycling in all areas at little cost.[59]

8.65 Transit-oriented development can improve public transport use. This refers to medium density mixed-use development around public transport nodes - this will usually mean rail stations, since rail best provides the visibility and permanence needed to attract this sort of development (high quality segregated busways may also serve).[60]

8.66 It should be stressed that transit oriented development is not the same as general 'urban consolidation'. This is usually taken to mean the attempt to increase population over wide areas of established suburbs by infill development or rezoning for denser development. Capital city strategic plans now commonly aim to house a significant proportion of future population growth within the existing urban footprint, to limit the amount of greenfields development at the fringe.[61] Undiscriminating urban consolidation usually arouses strong opposition from residents, and there is debate

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59 For related suggestions see Alan Parker Design, *Submission 12*, Appendix B. Residential Environments Study Team, *Submission 102,* p. 3.

60 For an overview of transit oriented development see for example http://www.patrec.org/conferences/TODJuly2005/TODJuly2005.html which is the papers of a 2005 conference by the Western Australia Planning and Transport Research Centre (PATREC).

61 For example, Sydney 2005 Metropolitan Strategy calls for 60-70 per cent of new housing to be in established areas. NSW Department of Planning, *City of Cities - a plan for Sydney's future - metropolitan strategy*, 2005, p. 133.

over whether the benefits are worth the costs.[62] The committee makes no comment on that debate here, but stresses that many other planning initiatives to promote walking, cycling and public transport, as noted above, can and should be done in any case, regardless of views about the best overall urban population density.

8.67 Urban strategic planning is the responsibility of State and Territory governments. The needed initiatives involve State and local government. Most of them require regional scale planning going beyond the boundaries of any one local government area. The right institutional arrangements and powers are needed to ensure that the planning and the execution are coherent.[63] The Municipal Association of Victoria suggested that 'urban development needs to be supported by a fully funded and integrated planning approach that involves the key agencies, including councils and the State Government'.[64] In Western Australia, transport, main roads and strategic land use planning have been rolled into one Department for Planning and Infrastructure.[65] The International Association of Public Transport suggested that achieving less car-dependent cities 'requires clear urban planning strategies which look more than one or two election cycles ahead…'

> There is a need to develop an urban strategy in each city and to stick to it. In our bipartisan political system, that means getting support from both sides of the political spectrum. It also means getting buy-in from the Commonwealth government which still seems to have little interest in the internal affairs of our cities notwithstanding that 85% of Australians live in them.[66]

Comment

8.68 Most public discussion of encouraging public transport focuses on the technicalities of improving the public transport service, and unfortunately gives little attention to the important land use planning connection. It should always be stressed that all land use planning is transport planning, as land use planning decisions have a dominating effect on people's travel habits. The best public transport service will not attract customers if the nature of urban development in the catchment area makes it impossible for the route to serve people's needs.

8.69 Governments who promote urban consolidation to reduce car use need also to remember that the planning policy is not enough: the improved public transport must

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62 For a leading Australian 'urban consolidation sceptic' see Patrick Troy, *The Perils of Urban Consolidation*, 1996. For an example of residents opposition see Save Our Suburbs at http://www.sos.org.au/new_home.html See discussion in House of Representatives Standing Committee on Environment and Heritage, *Sustainable Cities*, 2005, p. 43.

63 Municipal Association of Victoria, *Submission 124,* p. 4.

64 Municipal Association of Victoria, *Submission 124*, p. 4.

65 Department for Planning and Infrastructure, *Submission 172*, attachment.

66 International Association of Public Transport, *Submission 32*, p. 31.

also be provided. Denser population in areas where existing public transport is mediocre or overloaded, without improvement, will simply increase traffic congestion.

8.70 In all these matters, the aim of policy is to change people's travel behaviour at the margin. In the foreseeable future walking, cycling and public transport will continue to be unsuitable for many travel needs. The aim is to encourage them where they are suitable. A commonly stated goal is to increase the public transport mode share from 10 per cent to 20 per cent of trips.[67] On the positive side, because the present public transport share is so low, only a small behavioural change by motorists would be needed to greatly increase public transport use. This would make better services more viable.[68]

More use of rail for long distance freight

8.71 Many submissions argued for more use of railways for long distance freight. Trains use about one third the fuel of trucks per net tonne kilometre.[69]

8.72 At present road and rail have about equal shares of Australia's total freight transport task in tonne/kilometres (35% and 37% respectively, with 28% sea and 1% air). However the vast majority of the rail task (86%) is transporting bulk commodities such as coal and ore. Road performs about 75% of the non-bulk freight task. It is suggested that only about 15-20% of total freight is 'contestable' - realistically open to competition between road and rail.[70] This is primarily non-bulk freight over longer distances on the main intercity routes. The advantage of rail increases with distance, as the lower line haul cost begins to outweigh the cost of transhipping at the journey's beginning and end. The rail share of land freight on these routes ranges from 10-15% (Sydney-Melbourne) to 70-80% (eastern states-Perth).[71]

8.73 The Bureau of Transport and Regional Economics (BTRE) expects that on present trends, assuming no significant change in infrastructure, the long term decline

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67 For example, Bus Industry Confederation, *Submission 129*, p. 14.

68 For example, if car and public transport trips are now in the ratio 9 to 1, and 10 per cent of car trips become public transport trips, this would almost double public transport use.

69 Rail 0.0085, road 0.0265 litres per net tonne kilometre: Bureau of Transport Economics, *Competitive Neutrality Between Road and Rail*, working paper 40, 1999, p. 59. Figures are for non-bulk freight on an 'average' interstate corridor, and allow for typical load factors. Fuel efficiency of both road and rail has probably increased since then.

70 A larger proportion of freight would be on routes where rail service could theoretically be provided, but would not be viable because of the overwhelming natural advantages of road service on those routes.

71 Department of Transport and Regional Services, *Auslink White Paper*, 2004, p. 3. Australasian Railway Association, *Australian Rail Industry Report 2003,* p. 9. Mr S. St Clair (Australian Trucking Association), *Committee Hansard* 12 May 2006, p. 85. Bureau of Transport and Regional Economics, *Freight between Australian Cities, 1972 to 2001*, information sheet 22. BTRE, *Freight Measurement and Modelling in Australia*, report 112, 2006, p. xxiii.

in rail's mode share will continue on most routes. However if there was significant improvement to rail infrastructure the result might be different.[72]

8.74 This situation has arisen partly because of the competitive advantage of road in speed and reliability (qualities which have become more important in the age of 'just in time' logistics); partly because of a history of poor rail management by former public authority owners; and partly because of past government policies to invest heavily in improving roads and comparatively little in improving railways. For example, over the last 30 years the Hume Highway has been almost entirely rebuilt and duplicated.[73] The Sydney-Melbourne railway remains on the alignment built in the 1870s, with many speed-limiting curves and gradients.[74]

8.75 Commonwealth policy recognises that the rail system has been underfunded in the past and has the potential to increase its share of the freight task if there are improvements to infrastructure and modernisation of operating practices.[75] The Commonwealth has committed $2.4 billion to rail improvements over the 5 years to 2008-9, mostly for the Melbourne-Sydney-Brisbane corridor.[76] In the longer term, Auslink 'corridor strategies' promise a balanced assessment of the road and rail infrastructure needs of key corridors for the sake of the most efficient overall outcome.[77]

8.76 The Australian Trucking Association (ATA) supports the need for investment in railways, but is concerned that the road freight industry should not 'have imposts put on our business simply to make rail more competitive.' The ATA also argued that heavier trucks should be permitted for the sake of their greater fuel efficiency.[78]

Comment

8.77 Fuel efficiency or possible oil depletion do not figure particularly in the 2004 Auslink White Paper (Commonwealth government transport policy). The Auslink policies and first five year program are based on goals of general economic efficiency,

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72 BTRE, *Freight Measurement and Modelling in Australia*, report 112, 2006, p. xxiii.

73 113km of the Hume Highway remains unduplicated: Department of Transport and Regional Services, *Sydney-Melbourne Corridor Strategy* [2006], p. 4.

74 Dr P. Laird, *Committee Hansard,* 30 June 2006, p. 81. In fact the current Sydney-Melbourne rail alignment is *worse* than as built in the 1870s. In the 1910s many deviations were made to obtain easier grades at the cost of sharper curves and longer overall distance. For today's faster, more powerful trains it would be better if the deviations had not been made.

75 Department of Transport and Regional Services, *Auslink White Paper*, June 2004, p. 62.

76 This is a combination of grants under Auslink funding programs; direct grants to the Australian Rail Track Corporation, which controls the main interstate routes; and the ARTC's own investment (the ARTC is Commonwealth owned).

77 Australian Government, *Auslink White Paper*, 2004.

78 Mr S. St Clair (Australian Trucking Association), *Proof Committee Hansard,* 12 May 2006, p. 85. ATA, *Submission 131*, p. 23.

considering the predicted strong growth of freight transport over the next 20 years.[79] However it may be expected that if there is a long term rise in the price of fuel, this will favour rail because fuel is a greater proportion of costs for road transport. This may suggest a need to increase the pace of catchup investment in rail infrastructure. Auslink corridor strategies ought to allow for this.

Recommendation 9

8.78 The committee recommends that corridor strategy planning take into account the goal of reducing oil dependence as noted in recommendation 2. Existing Auslink corridor strategies should be reviewed accordingly.

8.79 Competitively neutral pricing of access to road and rail infrastructure is an essential prerequisite to economically sound decision-making about investment priorities. This has long been controversial - rail interests argue that heavy trucks do not pay enough for the use of roads, while trucking interests argue that they do. The Productivity Commission has recently investigated this, but at the time of writing, the report had not yet been released.[80]

8.80 The committee agrees with the Australian Trucking Association that there is no case to hamper the road freight industry by regulation or by excessive charges, merely in order to improve the competitive position of rail. Once economically rational investment priorities and competitively neutral access charges are assured, road and rail should be able to compete on their merits. If there is a long term rise in the price of fuel, this will show itself in changing their competitive position.

8.81 The committee comments on the Australian Trucking Association's suggestion that bigger trucks should be allowed for the sake of their fuel efficiency: this idea should be approached with caution. The overall effect needs more detailed study. Bigger trucks will cause greater road wear and accident costs. They will also tend to be concentrated on the routes which compete most directly with rail. If they take traffic from rail, given that rail is more fuel efficient still, the net result in terms of fuel efficiency could be counterproductive.

Other matters: fringe benefits taxation of employer-provided cars

8.82 Many submissions argued that the concessionary tax treatment of cars as a fringe benefit should be abolished. They argued that the concession encourages the

79 The 2004 Auslink White Paper in a few words flags the possible issue of 'depletion of fossil fuel supplies before alternative energy sources are developed' (pp 21 and 115), but makes no further comment.

80 Productivity Commission, *Road and Rail Infrastructure Pricing*, discussion draft September 2006. It is also argued that rail access charges may not recover long term asset replacement costs: BTRE, *Land Transport Infrastructure Pricing: an Introduction*, working paper 57, 2004, p. x.

use of cars for commuting and is contrary to widely held government policy goals to promote public transport and restrain urban traffic congestion.

8.83 Private use of employer-provided cars is taxed by recording actual business and private use (the operating costs method), or by deeming certain proportions of business and private use using a statutory formula. About 90 per cent of car fringe benefits tax is calculated by the statutory method. The statutory formula deems that the taxable fringe benefit is the base value of the car times a percentage which varies according to how far the car is driven in the year. The taxable fringe benefit is less if the car is driven further. The rationale for this seems to be an assumption that if the car travels further, it is likely that a smaller proportion of its use is private.

km travelled during the FBT year	statutory percentage
less than 15,000	26
15,000 to 24,999	20
25,000 to 40,000	11
over 40,000	7

8.84 The tax is concessionary because the statutory formula overestimates the amount of business use; thus some private use is untaxed.

8.85 The concession was worth about $1.1 billion in 2004-5.[81] The tax forgone is about 43 per cent of the tax that would be collected if the taxable fringe benefit was calculated accurately. The concession is worth, on average, about $2,300 per vehicle.[82]

8.86 The statutory formula method of calculating the tax liability, which creates the concessionary aspect, was adopted to minimise compliance costs and to support the Australian car industry, which at the time (1986) attracted significant government support and provided nearly 85 per cent of car sales.

8.87 The Institute of Chartered Accountants in Australia (the ICAA) argues that the concessionary treatment should be ended, since:

- it undesirably distorts economic behaviour; and
- as a way of assisting the Australian car industry it is poorly targeted, as now only 29 per cent of new cars are Australian-made.

8.88 The ICAA points out that the question of minimising compliance costs is distinct from the question of whether the tax should be concessionary. A statutory

81 Treasury, *Tax Expenditures Statement 2005*, p. 125.

82 Based on about 463,000 affected vehicles in 1999-2000, the last year for which figures are available. The Institute of Chartered Accountants in Australia, *Fringe Benefits Tax - Decision Time,* 2006, p. 19.

formula method could be maintained for the sake of easy compliance, while the concessionary aspect could be removed by adjusting the rates.[83]

8.89 The concessionary treatment of FBT on cars encourages car use and contributes to urban congestion. It is suggested that in Sydney 50 per cent of cars on the road in peak hours enjoy the concession.[84] As well, it is often noted that the sliding scale encourages people to drive further merely to reach the threshold distance that earns a lower fringe benefits tax.

8.90 Some submissions also suggested that public transport tickets should be given a tax concession in some way - for example, in Canada 15.25 per cent of the cost of a monthly or longer transit pass can be claimed as a rebate of tax.[85] At present in Australia employers are free to offer public transport tickets as a fringe benefit but, by contrast with an employer-provided car, there would be no tax advantage in doing so. On the other hand, Treasury argued that a tax benefit for public transport use would seem to be contrary to fundamental principles of the tax system:

> If you were to start using the fringe benefits tax regime to provide an incentive for people to use public transport, you would run into an issue about effectively providing a tax deduction for private expenditure.[86]

Comment

8.91 The committee notes that the Council of Australian Governments (COAG) in February 2006 resolved to investigate options for managing urban traffic congestion consistent with jurisdictional responsibilities.[87] The committee suggests that this include the Commonwealth reconsidering the policy behind the concessionary treatment of the fringe benefits tax on cars. The policy encourages car use for peak hour commuting, and now seems to serve little of its original purpose.

8.92 The committee notes suggestions that public transport tickets should earn a tax concession in some way as a 'levelling the playing field' measure. In relation to this, it should be noted again that the car FBT regime is concessionary because of the construction of the statutory formula, not because the trip to and from work is tax-free. The trip to and from work is not tax-free - as a general rule it is regarded as private use, just as a public transport trip is.[88]

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83 The Institute of Chartered Accountants in Australia, *Fringe Benefits Tax - Decision Time,* 2006, p. 19.

84 House of Representatives Standing Committee on Environment and Heritage, *Sustainable Cities*, 2005, paragraph 5.75.

85 See http://www.cra-arc.gc.ca/whatsnew/items/transit-e.html

86 Mr M. Jacobs (Department of the Treasury), *Committee Hansard,* 18 August 2006, p. 30.

87 COAG communiqué, 10 February 2006.

88 Australian Taxation Office, *Reportable Fringe Benefits - Facts for Employees*, p. 3.

8.93 If the concessionary aspect of car FBT related specifically to the trip to work, there might be logic in suggesting a corresponding concession for a public transport fare. But this is not the case. The best 'levelling the playing field' measure would seem to be to end the concessionary aspect of the car FBT, not to create an ad hoc new concession for public transport fares which is contrary to the fundamental logic of distinguishing private and work related expenses in the tax system.[89]

Recommendation 10

8.94 The Committee recommends that the government review the statutory formula in relation to fringe benefits taxation of employer-provided cars to address perverse incentives for more car use.

8.95 It should be stressed again that the question of whether the tax should be concessionary is different from the question of minimising compliance costs. A statutory formula method can be retained for the sake of easy compliance, while the concessionary aspect can be removed by adjusting the rates.

General comment on demand management measures

8.96 When government considers the range of policies needed to reduce oil dependence, and the level of government intervention or support that they deserve, the costs and benefits of demand side measures versus supply side measures should be compared. A litre of oil saved through a fuel efficiency measure, or by turning a car trip into a bicycle trip, is just as real as a litre of oil found by new exploration or produced in a coal to liquids plant.

89 A tax rebate for public transport fares might also be regressive as it would not be available to those who pay no tax.

8.97 It should be remembered that measures to reduce demand for oil-fuelled transport also have other benefits - reducing greenhouse gas emissions; promoting the environmental and social benefits of less car-dependent cities - which the alternative fuels do not have, or have to a lesser degree. In the cost/benefit comparison these extra benefits should count to the credit of the demand management measures.

Senator the Hon. Bill Heffernan
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