



**RACQ Submission to the
Australian Transport Council / Environment
Protection and Heritage Council –
Vehicle Fuel Efficiency Working Group**

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Submission Template

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General comments on a package of measures

1. Do you consider the actions of the type outlined in this paper are required, or are current arrangements sufficient?

The RACQ represents 1.2 million motoring members and seeks to maintain the viability of motor vehicle transport on their behalf. As such, the RACQ welcomes strategies to make fuel-efficient, low emission vehicles more affordable and supports many of the initiatives outlined in this paper.

Current arrangements are demonstrably not sufficient as fuel efficiency of new vehicles in Australia has barely improved despite record increases in fuel prices over the last few years.

2. If you consider further actions may be required, which measures, or package of measures, offer the greatest potential to cost-effectively reduce greenhouse emissions from the road transport sector?

Fleets and private motorists should be encouraged to upgrade to low-emission vehicles. For this to occur, the Government must provide additional incentives and options to consumers, and promote greater manufacturing investment in low-emission vehicles.

The key is to make low-emission vehicles more affordable, available and attractive by:

- improving CO₂ emission standards;
- reducing vehicle taxes and reforming company taxation frameworks;
- offering rebates and financial incentives on the purchase of low-emission vehicles;
- improving consumer awareness through information, education, and advertising; and
- investing in fuel and vehicle technology.

3. In your view, are there particular combinations of measures that would enhance the potential benefits of the measures?

The RACQ endorses a range of tools to reduce the greenhouse gas emissions of vehicles and stresses the importance of both demand and supply side mechanisms to deliver this.

The RACQ believes that synergies could be achieved by combining:

- vehicle advertising of CO₂ emissions with eco-driving initiatives;
- low-emission vehicle rebates with a voluntary CO₂ emissions target; and
- reforms to business-related vehicle tax with the removal and reduction of general taxes on low-emission vehicles.

4. Are there barriers or challenges to the uptake of low emission transport technologies in Australia which have not been identified in this paper?

The Discussion Paper did not address import tariffs or vehicle stamp duty. Both of these taxes discourage consumers from upgrading to low-emission vehicles and should therefore be reviewed.

5. Are there opportunities to improve vehicle fuel efficiency within the Australian road transport sector which have not been identified in this paper?

In addition to policies outlined in the Discussion Paper, eco-driving and traffic congestion reduction can also significantly reduce road transport emissions.

Research has shown that the stop-start traffic conditions associated with congestion increase fuel consumption and greenhouse gas emissions by around 30 percent. Therefore Government initiatives and funding of infrastructure to reduce congestion can assist to improve fuel efficiency.

Substantial reductions in vehicle emissions can also be achieved by educating motorists to drive efficiently. Eco-driving offers a practical, low cost measure to reduce vehicle emissions, the benefits of which can be realised immediately.

6. Do you have views on possible social or economic impacts arising from measures outlined in this paper? How could these impacts best be managed?

A feebate scheme could have inequitable and inefficient outcomes, and disadvantage large families and others who require a large vehicle to meet their needs. A rebate program for low-emission vehicles would be a simpler and more equitable system.

7. General Comments

The RACQ welcomes the Council of Australian Governments (COAG) initiative to review opportunities to improve vehicle fuel efficiency and the establishment of the Australian Transport Council (ATC) and Environment Protection and Heritage Council (EPHC) Vehicle Fuel Efficiency Working Group.

Policies designed to stimulate supply and demand for more fuel-efficient vehicles represent a strong opportunity for CO₂ reduction in the transport sector. It is encouraging to see that initiatives such as the Government's Green Car Innovation Fund are already occurring.

While the RACQ acknowledges that mechanisms such as eco-driving and congestion reduction are outside the scope of the Vehicle Fuel Efficiency Working Group's review, we stress the potential for these measures to reduce CO₂ emissions in the transport sector.

Category 1 Measures to Increase the Supply of Low Emission Vehicles

1.1 CO₂ Emission Targets for New Light Vehicles

1. Do you consider there is a case for tightened CO₂ standards for the light vehicle fleet in Australia?

The RACQ supports tougher CO₂ emissions standards and specifically affirms the Fédération Internationale de l'Automobile (FIA) passenger car target for carbon dioxide emissions of 140 grams per kilometre (140g CO₂/km).

Compared to Australia, vehicles in the United Kingdom and many other countries are significantly more fuel-efficient and international experience suggests there is scope for improved carbon emissions standards for cars. Modelling conducted by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) confirms this, and found that achieving even moderate new vehicle CO₂ emissions standards could effectively improve fuel efficiency and slow future growth in emissions.¹

Australia has a high dependency on car travel. It accounts for around 80 per cent of all passenger travel, and it is a highly energy intensive form of transport. Among OECD countries, Australia has the third highest energy use for passenger kilometres travelled² and between 1990 and 2004 the energy efficiency of cars in Australia improved by only 4 per cent as older cars were replaced with more energy efficient models.³

Adopting the FIA target of 140g CO₂/km would commit Australia to reducing national average carbon emissions for new vehicles by 38 percent. This is an achievable long-term goal.⁴ As noted in the Discussion Paper, there is scope for improvement in the short-medium term of at least 30 percent without affecting model mix, and greater penetration of diesel vehicles alone would deliver significant CO₂ reductions.⁵

Establishing a long-term 140g /km target for CO₂ emissions would also align Australia's policy with that of many other countries. More than 60 percent of Australia's new vehicles are imported from Japan, Thailand and Korea.⁶ These countries are increasingly manufacturing lower carbon emission vehicles to satisfy markets in the European Union. Members of the Japan Automobile Manufacturers Associations (JAMA), including Nissan, Honda, Mitsubishi, Suzuki and Toyota, are committed to a CO₂ emissions target of 140 g/km by 2009. The Korean Automobile Manufacturers Association (KAMA), which includes KIA, GM Daewoo and Hyundai, has similarly agreed to this target.⁷ These commitments to reduce CO₂ vehicle emissions from major automobile manufacturers, especially those that dominate Australia's import car market, suggest that over time a standard of 140g CO₂/km could be achieved in Australia with minimal economic cost.

¹ Australian Transport Council (ATC) and Environment Protection and Heritage Council (EPHC) Vehicle Fuel Efficiency Working Group with support from The Australian Government, *Vehicle Fuel Efficiency - Potential measures to encourage the uptake of more fuel efficient, low carbon emission vehicles - Public Discussion Paper*, 2008, p 37

² The Climate Institute, *Defining a National Energy Efficiency Strategy – Stage 1 Report*, July 2008, p20

³ Department of Climate Change, *Carbon Pollution Reduction Scheme Green Paper*, July 2008, p19

⁴ Australian national average carbon emissions in 2007 were 226 g/km: ATC and EPHC Vehicle Fuel Efficiency Working Group, p 37

⁵ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 44

⁶ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 13

⁷ Cleff, T., Heneric, O., and Spielkamp, A., *Chapter 5: Regulation and Industrial Policy: European's Automotive Industry on the Move*, Centre for European Economic Research, 2005.

2. If you consider tightened standards are required, should they be voluntary or mandatory?

Voluntary CO₂ emissions standards are preferable and provide scope for accompanying market-based policies to produce efficient outcomes at least cost to the economy. While voluntary standards can incur some associated manufacturing risk and possibly 'first mover' disadvantage, these risks have already been partially addressed by the Government's *Green Car Innovation Fund*. In addition, risk to vehicle manufacturers could be further reduced by establishing complementary consumer incentives alongside a voluntary CO₂ emissions target. Consumer incentives could include rebates and reduced vehicle taxes for low carbon-emission car purchases.

3. Do you have a view about the design of any system – for example do you agree that the standard should be a sales-weighted average? Do you agree with the European Union proposal to link the standard to vehicle weight, or should it be based on different parameters?

System design should incorporate both short and long term CO₂ emissions goals. For example, a long-term target of 140g CO₂/km could be established in conjunction with short-term interim targets. This would align to BITRE modelling that supports setting both short and long-term emission standards to increase the reduction in CO₂ emissions from the light vehicle fleet.⁸

RACQ agrees that utilising a sales-weighted averaging methodology would allow coverage of the full range of vehicle models sold in Australia and provide flexibility for manufacturers to meet the overall CO₂ target at lowest cost. However, the system must also accommodate manufacturers that specialise in large or performance cars, as they would struggle to meet a stringent CO₂ target. This could be achieved by allowing niche manufacturers to purchase industry credits from vehicle manufacturers exceeding CO₂ targets.

The RACQ does not support linking CO₂ standards to vehicle weight. As noted in the Discussion Paper, poorly designed weight-based standards may create an incentive for manufacturers to add weight rather than cut emissions. A preferable option would be to link the standard to vehicle "footprint" (a product of vehicle wheelbase and width). Unlike weight standards, a footprint-based standard would be difficult to manipulate because vehicle footprints cannot easily be changed without significantly altering vehicle shape and design characteristics.

4. Do you consider that CO₂ standards can effectively operate independently of other measures, or are other measures critical to their success?

Voluntary vehicle standards will work most effectively when there are also:

- sufficient incentives for research and technology development,
- public reporting against targets, and
- reduced risks for manufacturers.

A voluntary CO₂ standard is more likely to succeed if complementary incentives are established to stimulate consumer demand for low-emission vehicles. As discussed in Category 1.1 Question 2 above, effective consumer incentives could include rebates and reduced taxes on low carbon-emission vehicle purchases.

⁸ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 37

5. Do you consider that market pressures, such as rising fuel prices, will be sufficient to deliver significant CO₂ reductions from the light vehicle fleet, without the need for CO₂ standards?

Within the current tax and regulatory environment, rising fuel prices and introduction of the *Carbon Pollution Reduction Scheme* will not incite significant behavioural change among motorists or dramatically increase demand for low-emission vehicles. Reforms to improve vehicle efficiency are therefore needed to effectively reduce passenger vehicle CO₂ emissions.

Demand for fuel in response to price changes is relatively inelastic and fuel price increases have been shown to bring about only small decreases in consumption. For example, the rise in petrol prices over the last two years has had only a minor dampening effect on demand. Recent price movements associated with global economic challenges also highlight that fuel prices are volatile and will not always trend up.

6. General Comments

Supporting an international objective such as the FIA passenger car target of 140g CO₂/km would help provide greater certainty to vehicle manufacturers globally and potentially minimise low emission vehicle development costs.

Category 2 Measures to Increase Demand for Low Emission Vehicles

2.1 Restructure State registration and stamp duty charges for light vehicles

1. Would a stamp duty differential charging scheme be an effective means of encouraging consumers to purchase more fuel efficient vehicles?

Vehicle stamp duty should not be modified to create a differential charging scheme, rather, it should be removed altogether. Vehicle stamp duty has the perverse effect of discouraging consumers from upgrading to more fuel-efficient cars.

Stamp duty is an inefficient and inequitable tax. It incurs large compliance costs and is a tax inconsistently levied on a narrow base. This results in a net loss of economic value and adds to the 'efficiency cost' of taxation. For example, stamp duty is applied to cars and property, but not to the purchase of computers or washing machines.

In Queensland, stamp duty adds \$600 to the purchase of a \$20,000 four-cylinder car and therefore acts as a disincentive for consumers to buy new, fuel-efficient vehicles. Along with many other fixed motoring taxes, stamp duty also fails to take into account the extent to which the vehicle is used.

2. Would a registration differential charging scheme be an effective means of encouraging consumers to purchase more fuel efficient vehicles?

Existing international schemes show that differential registration charges and vehicle taxes can effectively increase market penetration of fuel-efficient cars, and produce as much as a 5 percent reduction in new vehicle emissions within 6 years.⁹

Overseas experience also suggests that a registration differential charging scheme would enhance a voluntary CO₂ vehicle emissions standard. When Germany introduced an annual vehicle tax incentive scheme in 1997, low emission (Euro 3) passenger cars increased from 1 percent to 70 percent of new car sales in one year, even though the Euro 3 standard did not become a mandatory requirement until much later. Similarly, in Sweden the introduction of a lower emissions-based vehicle tax in 1993 led to 75 percent of new cars exceeding minimum standards by 1996.¹⁰

A uniform national registration system, based on fuel efficiency, would be preferable to the existing registration structure and more efficient.

Currently registration charges differ significantly between States. In Queensland, South Australia and Tasmania charges increase with the number of vehicle cylinders and registration for a four-cylinder vehicle ranges from around \$100 in South Australia to \$263 in Queensland. In Victoria, registration is a flat fee of \$178 while in the remaining states charges vary according to vehicle

⁹ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 47

¹⁰ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 49

weight or engine capacity.

Giving motorists an option to convert registration from an annual fixed charge to a distance-based variable charge would also facilitate a reduction in vehicle CO₂ emissions.

3. Of the range of basic system models outlined in Measure 2.1 of the discussion paper, which would be the most effective at improving vehicle fuel efficiency and most understandable to the average motorist?

Within the options outlined in the Discussion Paper, a charging system based on the Federal Government's *Green Vehicle Guide*¹¹ would be easily understood by motorists and therefore likely to influence consumer behaviour. The *Green Vehicle Guide* website provides ratings for greenhouse gas emissions and air pollutants, and the star rating system makes it easy to compare vehicles' performance within size and use categories.

The Discussion Paper does not provide sufficient detail to determine whether a linear or stepped/banded charging system would be most effective.

4. What other considerations should be made in the design of any system?

Motorists should be given an option to convert their fixed vehicle and motoring taxes to distance-based variable charges. Such a mechanism would reduce CO₂ motoring emissions and give motorists an opportunity to save money when they drive less. The introduction of variable tax options could be delivered in conjunction with concessions on registration fees and reductions in other charges for low emission vehicles.

Differential charging systems should not be designed to increase overall costs to motorists, nor used as an opportunity for Government to increase revenue under the guise of environmental responsibility. Any differential registration scheme must be structured in such a way that motorists can avoid paying additional emissions-based costs by selecting a vehicle from a range of equivalent low-emission, low-cost alternatives.

The introduction of a differential registration scheme should be restricted to vehicles purchased from the date of scheme commencement. The resulting system would be easier to implement and potentially raise fewer equity concerns. While excluding older vehicles from the scheme may encourage some retention of high emission vehicles, the lack of available data for these cars makes it impractical to include them.¹²

5. General Comments

With respect to taxation mechanisms, the scope of the Discussion Paper is limited to stamp duty and registration. This appears unnecessarily restrictive and ignores additional opportunities to reform import tariffs and company tax structures for vehicles.

Import tariffs for fuel-efficient vehicles could be abolished and taxation redesigned to encourage

¹¹ www.greenvehicleguide.gov.au

¹² ATC and EPHC Vehicle Fuel Efficiency Working Group, p 55

purchase of fuel-efficient vehicles. Company cars are driven more and have higher average CO₂ emissions than private cars in Australia¹³. Suggested reforms include an accelerated depreciation allowance for low CO₂ emitting company cars, along with improvements to the Fringe Benefits Tax (FBT) statutory vehicle formula to remove incentives for additional travel.

¹³ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 16

Category 2 Measures to Increase Demand for low emission vehicles

2.2 Provision of direct financial incentives/disincentives based on vehicle CO₂ emissions.

1. Do you consider that direct rebate for low emission vehicles are an effective measure in reducing CO₂ emissions?

Yes. The RACQ supports initiatives that reduce motoring costs and increase consumer demand for low CO₂ emission vehicles, such as rebates for purchase of low-emission vehicles.

As noted in the Discussion Paper, many countries already provide fiscal incentives such as rebates, and the European Commission concluded that they are a “powerful mechanism” to encourage manufacture and supply of low emission vehicles.¹⁴

Studies have shown that motorists are not entirely rational in their economic decisions.¹⁵ However, even a rational consumer does not always have a financial incentive to invest in a fuel-efficient, low-emission car. There is a trade-off between the capital cost of a vehicle and its operating cost. Table 3 of the Discussion Paper shows that the most fuel efficient vehicle in a particular category can be significantly more expensive to purchase than less efficient vehicles of similar size. For example, in the medium car category a driver would need to travel around 200,000 kilometres to recoup the extra cost of the higher-priced vehicles in fuel savings, and around 500,000 kilometres in the small car category.¹⁶ If consumers base their decisions on financial parameters, there is little incentive for them to purchase the lowest-emission vehicle. This would be true even with the assumption that people gain some utility from ‘reducing their eco-footprint’. The Green Vehicle Guide website provided by the Government lists the top ten ‘best performers’ and ‘best sellers’ for small, medium and large cars. The 10th best performer in the large car category is the only car from all of the categories to also appear in the top 10 sellers. This is a clear indication of the need to provide financial incentives, such as rebates, for low-emission cars.

2. If so, do you consider that the cost of rebates should be offset with higher fees on high emitting vehicles (i.e. a feebate scheme)?

The RACQ cautiously supports further Government consideration of a feebate scheme. As noted in the Discussion Paper, there is a lack of practical data upon which to evaluate feebate schemes. While many countries provide rebates and fiscal incentives for the purchase of low-emission vehicles, few apply financial penalties to high-emission vehicles, and no country is using a structured feebate scheme such as that proposed in the Discussion Paper.

Consideration should only be given to a feebate system that is equitable and does not unduly disadvantage large families, who often require bigger vehicles. This would require a feebate system to treat small, medium, large cars and SUV’s as separate vehicle categories. It might also be preferable to replace the single pivot point in each category of vehicles with a range of emission ratings that are exempt from a rebate or fee. This would mean that only those

¹⁴ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 60

¹⁵ Kurani, K.S. and Turrentine, T.S., *Car Buyers and Fuel Economy?*, 2006, Energy Policy, Vol 35 (2), pp 1213-1223.

¹⁶ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 17

consumers purchasing high or low emission vehicles would be included in the program and net government transactions required to implement the feebate system could be reduced.

A feebate system would need to meet standards of equity and efficiency, however, without significantly adding to the complexity of the system, this would be difficult to achieve. Additional system complexity is then likely to increase administrative costs, and could also create unintended incentives by promoting the purchase of a higher emitting vehicle in one class at the expense of a more efficient vehicle in another.¹⁷

A registration system based on fuel efficiency, combined with purchase rebates for fuel-efficient vehicles, would be a simpler and more equitable arrangement.

3. Do you agree that any scheme should be based on CO₂ emissions and not linked to particular technologies?

The RACQ agrees that incentive schemes should be broad in application and not target specific vehicle technologies or fuels for CO₂ reductions. This allows competitive markets to adopt the most effective, efficient and economically viable solutions.

4. If a scheme was to be introduced, would you support it being based on a single threshold, or do you support a range of “class” based thresholds? What do you consider are the advantages and disadvantages of such approaches?

A range of thresholds based on small, medium, large cars and SUV's would be preferable to a single threshold feebate system. Designing a range of class-based thresholds would reduce social equity impacts and accommodate the larger vehicle needs of big households. A class-based feebate system is also less likely to impact negatively on manufacturers of primarily larger vehicles.

5. General Comments

International data suggests rebates influence both demand and supply side decisions and can effectively increase fleet penetration of fuel-efficient vehicles. Rebates for low emission vehicle purchases increase pressure on manufacturers to improve the efficiency of their vehicles and results in a more efficient new and used car fleet. They also provide a direct signal of the value of efficiency to motorists and reward them for purchasing fuel-efficient cars.

Rebates are preferable to a feebate system. Unlike feebates, rebates for low-emission vehicles are widely used internationally and are relatively simple to administer. In contrast, the complexity of design required to ensure a feebate system does not unduly penalise larger families, would introduce inefficiencies and add to the cost of the scheme.

It was disappointing to note that the Discussion Paper provided no analysis of social equity impacts associated with a feebate scheme.

¹⁷ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 62

Category 2 Measures to Increase Demand for Low Emission Vehicles

2.3 Develop fleet purchasing frameworks that incorporate greenhouse reduction objectives

1. Do you consider fleet operators would be motivated to participate in a national fleet accreditation process to improve the fuel efficiency of their fleet?

The impetus for fleet operators to participate in a national fleet accreditation process would largely depend on scheme design. Fleet managers would be more likely to join a scheme that offered significant commercial advantage, recognition and marketing opportunities.

2. If you do, what benefits do you consider fleet operators would expect to result from participation in such a scheme?

The primary benefit to business is likely to be lower fuel costs, along with savings and public relations opportunities associated with carbon pollution reductions.

3. Do you think that an accreditation scheme should have the sole goal of reducing CO₂ emissions? Should additional goals be considered (such as air quality)?

A fleet accreditation scheme should be broad enough to incorporate both CO₂ emissions and air pollution goals. Information contained within the *Green Vehicle Guide* could facilitate this process.

It would also be important for the accreditation scheme to separately identify reduced CO₂ emissions per kilometre, and overall fleet emission reductions. In this way, the accreditation scheme could recognise business efforts to reduce trips, as well as efficiencies gained from improved driving techniques and the purchase of low-emission vehicles.

Safety considerations, such as vehicle electronic stability control (ESC) and ANCAP¹⁸ safety ratings, should also be a feature of any fleet accreditation scheme.

4. Are you aware of fleet fuel efficiency schemes operating within Australia or overseas? Has there been an analysis of the effectiveness of these schemes?

The RACQ is unaware of fleet fuel efficiency schemes, beyond those described in the Discussion Paper.

¹⁸ Australasian New Car Assessment Program

5. General Comments

It is particularly important to improve the efficiency of commercial fleets. These cars travel greater annual distances than private passenger vehicles and are generally less fuel-efficient.¹⁹

Further initiatives to encourage efficient fleet systems could include an accelerated depreciation allowance for low carbon-emitting company cars and removal of FBT incentives for additional travel.

While it is outside the parameters of this Discussion Paper, the RACQ recommends that employees using company vehicles also be provided with ecodriving training. Substantial reductions in vehicle emissions have been achieved in commercial fleets through such training.²⁰

¹⁹ ATC and EPHC Vehicle Fuel Efficiency Working Group, p 8

²⁰ Geoff Rose and Mark Symmons, Institute of Transport Studies and Monash Sustainability Institute, Monash University, *Testing ecodriver training in Australian conditions*, presented at the 2008 ATRF conference

Category 3 Measures to Improve Consumer Awareness

3.1 Including Fuel Consumption Data in Vehicle Advertisements

1. Do you consider there is a case for including fuel consumption and CO₂ emissions data in vehicle advertising?

The RACQ agrees that there is a case for including vehicle fuel consumption and CO₂ emission data in advertising. This would complement the existing presentation of such data on vehicle labels and the Green Vehicle Guide website.

Most consumers would be aware that the fuel consumption figure provided on labels is not likely to be achieved in actual motoring. However, the RACQ does receive complaints from motorists who are unable to achieve the figures quoted in the label. Any advertisements including these figures should stress the difference between test and 'real world' figures.

In the past, the test figures provided a useful comparison between makes and models of vehicles as the difference between the test and real consumption figures was fairly constant. This difference was monitored by the Society of Automobile Engineers, which published conversion factors. However, recently the RACQ has found that the variance between 'real world' and label fuel consumption figures is not consistent between makes of vehicles. Consequently, the test figures do not always provide a valid comparison between makes. Further consideration of this problem could result in the adoption of improved procedures that provide a more accurate 'real world' consumption figure.

2. If so, what do you think would be the best way to implement it?

For the reasons outlined in the Discussion Paper, advertising of data would be achieved through the FCAI *Code of Practice for Motor Vehicle Advertising*. Legislative measures would bring unnecessary delays, burden, and inflexibility to the implementation of the requirement.

That being said, the RACQ is aware of instances where fuel consumption labels have not been applied to new cars when they were delivered to the buyer. Implementation of new additions to the Code should be accompanied by reinforcement of the current requirements.

3. Are there any matters not identified which would facilitate or impede the introduction of this measure? We are particularly interested in any published material you can point to.

The RACQ is not aware of any other matters not identified which would be an impediment to implementation of this measure.

4. What do you consider are the costs and benefits of the measure, and their likely magnitude? What is the basis of your views on this question?

The RACQ agrees that the costs of implementing this measure would be low. While the direct benefits may also be low, the advertising would help drive the market for low-emission vehicles.

5. Are you aware of any other countries implementing similar measures, and whether there has been any analysis of their effectiveness?

The RACQ is unaware of any overseas experience with such measures, beyond that described in the Discussion Paper.

6. General Comments

Fuel consumption and emission data are also available on the Greenwheels website (www.greenwheels.com.au), which provides a very clear presentation of data sourced from the Green Vehicles Guide. The site also identifies 'Low Emissions Vehicles' (LEV) for each class of vehicle, being vehicles having carbon dioxide emission within 25% of that of the lowest emitting vehicle in that class. The benchmark for classification as a LEV thus improves with the introduction of a better performing vehicle model. This encourages continuous improvement and avoids any need to update classification criteria.

Category 3 Measures to Improve Consumer Awareness

3.2 Standards / Labelling Requirements for Non-engine Components Which Impact on Fuel Consumption

1. Do you consider that measures in relation to non-engine components are worth pursuing?

The RACQ agrees that measures in relation to non-engine components are worth pursuing. The benefits of low-rolling resistance tyres, in particular, are sufficient to justify costs when considered over the life of the vehicle. RACQ reviewers also found gear shift indicators a useful aid in reducing fuel consumption.

The scope for including components is potentially large, and could include roof-racks, spoilers etc. Modern automatic transmissions can provide fuel consumption benefits as they optimise engine performance and reduce the likelihood of driver behaviour increasing consumption. Double clutch transmissions are particularly effective as they cause little power loss in operation. The proposed measures should be introduced to enhance the market for such components.

2. Do you agree with the Working Group's assessment that Australia should move quickly to assess/establish within Australia any measures agreed to internationally?

Adoption of international standards is strongly encouraged to reduce costs and minimise confusion. These standards also need to ensure adequate safety and reliability standards are imposed for safety-related components such as tyres.

3. General Comments

Vehicle features such as trip computers that provide instantaneous and average fuel consumption figures are important aids for drivers and encourage fuel efficient driving. The Government should encourage manufacturers to provide these features as standard equipment on all cars.

Category 3 Measures to Improve Consumer Awareness

3.3 Heavy Vehicle Environmental Rating Scheme

1. Do you consider there are gaps/inadequacies in the provision of heavy vehicle fuel efficiency data to business purchasers? Can you identify those deficiencies?

The RACQ has limited experience of heavy vehicle operations, but contacts with the transport industry indicate that the need for heavy vehicle fuel efficiency data varies with the size of vehicle purchased. Business purchasers of large heavy vehicles are generally knowledgeable of the purchase options for their particular situation, and as noted in the Discussion Paper large fleet operators have close links with manufacturers, from whom data may be available. Vehicles are purchased in specific configurations for specific needs, and it would be impracticable to provide meaningful data for every option.

While the lighter heavy vehicles are more generic, their fuel consumption can also vary considerably with their operation. Some fuel efficiency data could be helpful for purchasers, but it may be unlikely that such data would significantly influence purchase decisions

The real deficiency in current operations is the lack of consideration of fuel efficiency in purchase decisions, whether data is available or not. The promotion of efficient operation through web-based tools or similar ecodriving programs would raise the awareness of business purchasers to consider fuel use for the full operating life when making purchasing decisions.

2. If deficiencies exist, what do you consider is the most effective way to address these? Do you consider there is a case for web-based fleet management tools, and how should they be funded?

Through researching tools to improve the efficiency of motoring, the RACQ is aware of overseas programs to improve fleet efficiency, such as those described in the Discussion Paper. It appears such tools can make significant improvements in heavy vehicle fuel consumption and emissions. There would be a good case for providing similar tools in Australia.

Support of the industry bodies would be vital to the success of any tools.

3. What do you think would be the most important areas for any tools to address?

Based on the RACQ's research of eco-driving programs overseas, and the conclusions of a limited number of heavy vehicle studies in Australia, driver behaviour is the most important area for tools to address. Significant fuel savings can be achieved through simple measures such as limiting unnecessary gear changes and restricting idling times.

Changing driver behaviour to adopt these measures involves education of the reasoning and benefits of the measures, incentives for their adoption and feedback on the benefits gained. Benefits should include wider issues such as environmental improvements as well as fuel savings. Experience of similar programs has indicated that the under these circumstances the

changed behaviours become the norm, and are continued through force of habit.

4. Are you aware of any other countries implementing similar measures and whether there has been any analysis of their effectiveness?

See the Scottish Safed program for vans and heavy vehicles at www.safed.org.uk

The European Union Recodrive program is aimed at fleet operators, including heavy vehicle fleets – see www.recodrive.eu

5. Are there any additional matters that would facilitate or impede the introduction of fleet management tools? We are particularly interested in any published material you can point to.

Useful papers on Australian trials of measures to reduce heavy vehicle fleet fuel consumption are: *Testing ecodriver training in Australian conditions* by Rose and Symmons of Monash University, presented at the 2008 ATRF conference; and *Clean Run Behaviour Change Initiative Evaluation of Phase II* July 2008, published by the WA Dept Environment of Environment and Conservation.

6. Do you think the development of fuel efficiency guides for fleets would be a cost effective means to reduce fuel use of heavy vehicles?

Given the variation in large heavy vehicle use and configuration it is likely that fleet efficiency guides would not provide sufficient advantages to overcome the cost of their development. Operators of smaller heavy vehicles could benefit from guides, but the usefulness of these is limited by variations in fleet operations.

Fleet management tools offer much better prospects for reducing fuel consumption, and should be the focus of any future efforts. Such tools would apply immediately to all heavy vehicle operations, and help raise the awareness of fuel efficiency factors in the decision-making for heavy vehicle purchases and use.

7. Do you consider there is a case for development of a heavy vehicle environmental rating scheme similar to the light vehicle rating scheme? Do you agree with the assessment that any scheme should wait for the finalisation of international emission measurement standards?

As noted above, the variations in vehicles and fuel consumption of heavy vehicles due to operational differences and configuration may render any rating scheme of little benefit for the larger vehicles, but it may be of use for the smaller heavy vehicles.

If any environmental rating scheme was to be adopted it should be based on international standards where possible.

8. What do you think would be the most important areas for any scheme to address?

As noted above, any scheme should be focused on the smaller, more generic vehicles and should also emphasise the importance of efficient driving techniques and tools as these have the most potential to provide benefits.

9. General Comments

While heavy vehicles are the lesser proportion of vehicles on Australian roads, the large number of kilometres travelled compared to private cars means there is significant scope to reduce overall fuel consumption and vehicle emissions. Research of efficient driving techniques indicates that significant gains in efficiency – up to 25% reductions in fuel consumption and vehicle emissions - may be obtained through efficient driving of heavy vehicles.

The RACQ considers that the fundamental issue in improving the fuel efficiency of heavy vehicles is to increase the operators' perception of the importance of fuel efficiency. Trials of driving techniques mentioned in the comments above have shown that it is possible to bring about ongoing behaviour changes in operators and raise the importance of fuel efficiency during operations.

Category 3 Measures to Improve Consumer Awareness

3.4 Establish a technology demonstration scheme for Australian road transport fleets linked to achievement of greenhouse outcomes

1. Do you consider a subsidy scheme to support the development and trial of emerging low emission technologies is necessary to encourage innovation within the light commercial and heavy vehicle market segments? If so, is it an effective approach?

The upcoming reports of the Australian Government's Alternative Fuels Conversion Program would provide useful information on this issue. The heavy vehicle sector, including component manufacturers, should also be able to access the Green Car Innovation Fund or a similar scheme when they effectively demonstrate joint investment and possible commercialisation paths of the technology.

2. Are there additional (non-financial) barriers to the adoption of proven and emerging low emission technologies within the light commercial and heavy vehicle segments?

There is an issue with testing emerging low emission technologies to gain certification against standards. For example, the RACQ is aware that kits for converting diesel powered heavy vehicles to LPG are not able to be certified due to lack of diesel testing infrastructure to establish the performance of the technology. This is due to there being no diesel engine production in Australia. Emerging technologies may have to be supported by infrastructure provided by the Government and made available to industry.

3. Are you aware of any other countries implementing similar measures and whether there has been an analysis of its effectiveness?

The RACQ has not researched this area, and is not aware of any overseas programs other than the Freight Sustainability Demonstration Program that appears to have had some success in Canada.