



**ACT**  
Government

Environment and Planning

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~~Dear Ms Wieland~~ *Donna,*

## Vehicle Emissions Discussion Paper

Thank you for the opportunity to provide a submission on the Australian Government's discussion paper on vehicle emissions.

As a signatory to the Paris Agreement in 2015, Australia has now committed to the global transition towards decarbonisation. I am encouraged by the integrated approach to bring together the infrastructure, environment and energy portfolios as part of meeting Australia's abatement targets on limiting climate change.

I am also pleased to see the recognition that Commonwealth, state and territory policies and programs all play an important role in influencing the supply and demand for low emission vehicles and technologies. Whilst progress has already been made through the existing national adoption of noxious emission standards to improve the fuel efficiency and performance of light vehicles, much more needs to be done across the road transport sector.

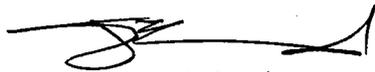
The ACT Government already has a strong commitment to addressing the challenges of climate change by setting ambitious targets for greenhouse gas emissions reductions. These targets are established within our *Climate Change and Greenhouse Gas Reduction Act 2010*. The policy document *Climate Change Action Plan 2 (AP2)* sets the strategic pathway to meeting these targets. This is complemented by our Transport for Canberra strategy, the ACT's policy framework for transport planning and sustainable transport policy.

As further commitment to the ACT Government's transition to a low carbon economy, we are also progressing a number of specific transport related initiatives as part of developing a Low Emission Vehicles Strategy to facilitate the uptake of newer, smaller, cleaner, lower emission vehicles, and encourage efficient travel behaviour.

For the purpose of this submission our response (Attachment A) relates mostly to the themes of noxious emission standards for light and heavy vehicles, fuel efficiency and quality standards, fleet purchasing policy, education, alternative fuels and electric vehicles.

I trust these suggestions will be of assistance to the Ministerial Forum and its working group in progressing the inquiry. I welcome the opportunity for ACT officials to continue to participate in the initiatives foreshadowed within the discussion paper.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Dorte Ekelund', with a long horizontal flourish extending to the right.

Dorte Ekelund  
Director-General

16 April 2016

# Attachment A: ACT EPD submission in response to the Vehicle Emission Discussion Paper

## Options to reduce vehicle emissions

### Adopt Euro 6/VI noxious emission standards for light and heavy vehicles

Question 4: Are there other ways governments could encourage the purchase and supply of vehicles that meet Euro 6 emissions standards?

- State / territory jurisdictions could consider:
  - Concessions to encourage the purchase of new lower emitting vehicles. The ACT currently has a differential stamp duty scheme that rewards new vehicles with good environmental performance. The best performing new vehicles pay zero duty on the purchase price.
  - Financial incentives such as discounted tolls and parking fares, and non-financial incentives (i.e. facilitating approvals for the installation of charging infrastructure etc.).
  - Policy actions that help to reduce the barriers for electric vehicle adoption, such as electric vehicle range, recharging and consumer awareness.

Question 5: What measures could governments adopt to ensure vehicles continue to comply with noxious emission requirements beyond the point of supply to the market?

- The ACT Government does not currently have any facilities that can undertake ADR drive cycle emission testing to ensure in-service vehicles comply with standards.
- State / territory jurisdictions could consider mandating more stringent testing of diesel engine vehicles together with annual vehicle registration.

Question 6: Should the Australian Government conduct a review to consider whether noxious emissions standards for motorcycles should be adopted in Australia?

- This issue warrants further review. In the last 10 years, motorcycles and scooters have undergone technological advances. Engines are now vastly more reliable and efficient. Emissions have also fallen as two stroke engines have declined to a minor portion of sales. Braking and handling improvements have greatly increased active safety, while technologies such as Anti-Lock Braking Systems (ABS), traction control, adaptive suspension and now airbag protection devices are spreading through the fleet.
- These advances have seen motorcycles and scooters become the fastest-growing segment of registered road vehicles (8% growth per year for the last decade) with over 700,000 motorcycles and scooters on Australian roads today. Most state / territory jurisdictions have recognised the growth and have in place strategies to support the use of motorcycles (i.e. parking spaces, travelling in transit lanes, registration concessions etc.).
- The ACT already has a differential duty scheme for new light vehicles based on CO<sub>2</sub> emissions. New vehicles that emit less than 130g of CO<sub>2</sub> per kilometre pay zero duty on the purchase price. The ACT is considering amending this scheme specifically to include motorcycles.
- Adoption of proper fuel efficiency standards can only be undertaken with evidence based data and therefore the Australian Government could be well equipped to undertake a review of the motorcycle sector to understand the impact of motorcycle emissions and whether appropriate standards could be adopted.

## Develop Fuel Efficiency (CO<sub>2</sub>) Standards

Question 7: What are the costs and benefits of adopting a fleet average standard for fuel efficiency (CO<sub>2</sub>-e) and Question 9: How would standards affect the range of vehicles offered in Australia?

- Adopting fleet average standards could help Australia to replicate the rate of improvement in fuel efficiency seen in international jurisdictions like the United States and Europe.
- Improvements to fuel efficiency could also create financial benefits for consumers through reduced fuel costs.
- The ACT Government has calculated that emissions from the transport sector account for 27% of our greenhouse gas emissions and projections are that in 2020, 54% of emissions will come from the transport sector. In order to achieve carbon neutrality in the ACT by 2060, the focus is on improving energy efficiency as well as substitution of fossil fuels with renewables. The Australian Government plays a role in achieving this legislated target through the continual tightening of emissions from new vehicle sales via the Australian Design Rules and fuel standards (Fuel Standard (Petrol) Determination 2001 and Fuel Standard (Automotive Diesel) Determination 2001).
- Fleet average standard results could be substantially skewed requiring a holistic approach to this policy to avoid unintended outcomes. For example, manufacturers may attempt to offset their popular family SUV with high emissions with large quantities of other vehicles with very low emissions. A high emission vehicle at a discounted pricing point would result in more overall emissions while the fleet average would still be relatively low.
- A more suitable approach is to set emission maximum levels for each vehicle class, such as the Euro 6 standards.
- Adopting standards with supportive measures for low or zero emission vehicles could encourage manufacturers to introduce more efficient vehicles to the Australian market.

Question 10: Apart from standards, are there any complementary or alternative measures that could be adopted to encourage the purchase and supply of more fuel efficient vehicles?

- Financial incentives could help reduce the upfront and ongoing costs for more fuel efficient vehicles. As indicated in the discussion paper, the Australian Government could examine further changes to the luxury car tax for vehicles to encourage more efficient vehicles.
- The ACT Government has a differential duty scheme to encourage the purchase of new vehicles that are more fuel efficient. The scheme is dependent upon the Australian Government's Green Vehicle Guide being kept up to date. The ACT vehicle duty categories A-D are assigned based upon the CO<sub>2</sub> emissions in grams per kilometre as stated in the Green Vehicle Guide. Further information: [http://www.rego.act.gov.au/\\_data/assets/pdf\\_file/0004/744412/Vehicle-Emission-Reduction-A3-A4-29June.pdf](http://www.rego.act.gov.au/_data/assets/pdf_file/0004/744412/Vehicle-Emission-Reduction-A3-A4-29June.pdf).
- Non-financial incentives that increase consumer awareness and understanding of the value proposition could help to strengthen demand for more fuel efficient vehicles. State / territory jurisdictions could also consider non-financial incentives such as reserved parking, access to priority lanes and improved information and education for consumers.

- The Australian Government may wish to consider visual changes to the fuel efficiency label. A label with additional information, like annual fuel costs would increase consumer education and awareness and could influence vehicle purchasing.

**Question 11: What would be the most efficient and effective measures to improve fuel efficiency of heavy vehicles in Australia?**

- Governments could further encourage innovation (especially through private sector investment) in technology to improve emissions without compromising on vehicle output (i.e. tonnes of freight moved per km travelled).
- In March 2016 the ACT Government released a Freight Strategy to facilitate an efficient, safe and well-designed freight network that connects people, goods and services. Through implementing network operations, heavy vehicles will take the most direct routes to destinations, spend less time on the roads and minimise the time where engines are idling.
- Other possible initiatives for consideration include education of drivers, changes to business practice to discourage idling, support for the movement of goods by rail rather than road, and the implementation of education tools aimed at logistics managers in businesses to maximise usage whilst minimising fuel consumption and costs.
- In order to achieve carbon neutrality in ACT Government operations by 2020 (Carbon Neutral Government Framework, 2014), the ACT Government has included requirements for heavy vehicles in its fleet such as buses, emergency services vehicles and trucks to shift to lower intensity fuel types and investigate cost-effective alternate fuels.
- In addition, large government contracts such as for waste and recycling from domestic and government operations are required to report on their greenhouse gas emissions. Through supporting governments, businesses and households to become carbon neutral themselves, the Australian Government would also be able to report on reductions in CO<sub>2</sub> emissions.

**Question 12: Should the Australian Government conduct a review to consider whether fuel efficiency measures for motorcycles should be adopted in Australia?**

- The Australian Government could be well placed to introduce emission standards for motorcycles, both noxious and greenhouse gas emissions.
- At present, purchasers have access to information on the engine capacity and expected fuel consumption however, there is an information gap as to the running cost and environmental impact of a motorbike they are considering. As city planning strategies increasingly move towards strategic demand management of parking, the proportion of kilometres driven by motorbikes will increase.
- Greater visibility of greenhouse gas emissions from motorbikes at the time of purchase could be achieved by adopting the same 'sticker' as is used on passenger cars.
- According to <http://www.fcail.com.au/sales> in 2014 there were 111,000 motorbikes, ATVs and scooters and 1,113,000 passenger cars sold in Australia. Even though the Discussion Paper reports that the current usage of these motorbikes is low, it is probable that the proportion will rise given the reasons above.

## Other complementary measures

### Fuel Quality Standards

Question 13: Are there changes to fuel quality standards that could assist with reducing noxious emissions and/or CO<sub>2</sub> emissions?

- The arguments presented in the discussion paper identify that, because tailpipe emissions are measurable, emissions are the responsibility of the vehicle and its manufacturer. Fuel quality can be measured and deemed fit for use/sale by meeting standards in its own right. As most is imported, and the remaining oil refineries in Australia have already invested in meeting the current 2002/2008 standards, this should be achievable. Fuel standards are the responsibility of the Australian Government and are legislated through:
  - o Fuel Standard (Petrol) Determination 2001
  - o Fuel Standard (Automotive Diesel) Determination 2001.
- With the enhanced focus on greenhouse gas emissions from the transport sector since these determinations were prepared and amended, these standards could be improved to include tighter restrictions on all greenhouse gases. At present, the Fuel Quality Standards Act 2000 provides the regulatory framework to improve urban air quality rather than to reduce greenhouse gas emissions. Japan, Singapore, Hong Kong and China have Euro 5 fuel standards for petrol and diesel whereas Australia meets Euro 4 for premium unleaded petrol and Euro 5 for diesel.
- Section 3.3 of the Vehicle Emissions Discussion Paper does not provide a discussion of the components of transport fuel aside from sulfur. Given the health impacts of volatile organic compounds (VOCs) and particulate matter and the greenhouse gas impact of carbon monoxide, nitrogen oxides and sulfur oxides, it is insufficient to solely refer to the current standards of sulfur content.

### Information and Education

Question 17: Have you found the information provided on the fuel consumption label and the Green Vehicle Guide website useful in considering the purchase of a new vehicle?

- Providing information to prospective electric vehicle owners on costs of ownership and vehicle fuel-saving benefits on websites is an important basic step. The ACT Electric Vehicle Council website allows consumers to calculate the daily cost of running a petrol car compared with an electric car, find the location of ACT electric vehicle charging points, and view resources about electric vehicles including their benefits (<http://www.electricvehiclecouncil.com.au/>).
- The GVG website has been a useful resource, however with the recent update and removal of the star rating guide has meant the information may now be less accessible for consumers.
- The Australian Government could be well placed to review how information to consumers via the fuel consumption label and the GVG could be improved.
- The ACT Government's vehicle duty scheme is based upon the advertised CO<sub>2</sub> emissions directly from the GVG website. The Vehicle Emission Reduction Scheme provides information and web links to the GVG for consumers. Further information: [http://www.rego.act.gov.au/data/assets/pdf\\_file/0004/744412/Vehicle-Emission-Reduction-A3-A4-29June.pdf](http://www.rego.act.gov.au/data/assets/pdf_file/0004/744412/Vehicle-Emission-Reduction-A3-A4-29June.pdf).

- The Green Vehicle Guide is also used to inform ACT Government fleet purchases. The ACT Government has a policy of carbon neutrality (zero emissions) by 2020, which translates into the smallest amount of fuel possible to effectively conduct government operations. The ACT's Carbon Neutral Government Framework (Action 29) requires the ACT Government to enable continuous improvement in energy performance and reduce the greenhouse gas emissions of the fleet. The targets are for a minimum of 50% of the fleet to comply with Green Vehicle Guide's A-Rating by 2015 and 80% by 2020. Where fit for purpose, vehicles with the lowest fuel consumption, hence greenhouse gas emissions, are selected.
- Emissions from transport are reported in the ACT Greenhouse Gas Inventory, government annual reports and the ACT Government emission profile. These are calculated using actual litres of fuel purchased converted using an emissions factor for the fuel type.
- For private purchases, the data on the Green Vehicle Guide website is not used to calculate greenhouse gas emissions. Because the quoted fuel consumption figure is consistently an underestimate of real driving conditions, it is treated as a general indicator rather than to calculate dollars per year fuel costs.

Question 21: What could governments do to improve the availability of data on fuel efficiency of used vehicles?

- The Australian Government could promote greater awareness of the GVG website.
- State / territory jurisdictions could consider requiring a fuel efficiency label on used vehicles as mandated in some international jurisdictions.
- At present, there are other online resources that contain information about fuel efficiency for light vehicles sold in Australia. The redbook.com.au website is well known by car dealers and consumers.

Question 22: How could governments encourage more efficient driver behaviour?

- Facilitating more efficient demand management could help encourage more efficient driver behaviour.
- The emergence of intelligent transport systems (ITS) such as traffic management systems also has the potential to deliver more efficient travel patterns. Traffic management systems, cooperative ITS (C-ITS) applications involving telematics, vehicle-infrastructure and vehicle-vehicle communications can reduce the overall kilometres travelled for vehicles, which can significantly reduce emissions.
- The smooth driving style promoted in European countries is substantially different to that taught a generation ago. With many parents teaching their children how to accelerate, brake, change gears and coast, state / territory jurisdictions play a role in driver instruction for those who have not been taught in the newer style.
- The ACT Government recognises the benefits of more efficient driver behaviour and is considering incorporating them into the Road Ready program to increase community awareness about eco-driving techniques, particularly among younger drivers.

## Fleet Purchasing Policy

Question 23: What role, if any, should the Government fleet purchasing policy play in encouraging the supply and purchase of more efficient vehicles?

- Fleet turnover typically occurs at 3-5 years, and provides a large proportion of the second-hand vehicle market. The Australian Government should follow the lead of the state and territory governments and update its fleet procurement policy to place a high emphasis on fit for purpose, low emission, cost effective vehicles.
- The ACT's passenger vehicle and light commercial fleet policies are available online at: <http://www.cmd.act.gov.au/governance/public/publications#vehi>  
Since the ACT Government updated its fleet policies in 2010, the fleet managers and executive have embraced these policies. The aim of the policies is to have the minimum number of vehicles to meet operational requirements and then for those leased vehicles to have the best energy efficiency.
- The ACT Government currently promotes the use of electric vehicles in its fleet through the use of lively visualisation of a 'plug' graphic on the side of vehicles. The ACT passenger fleet comprises almost exclusively fuel-efficient, small engine vehicles including 16 electric vehicles (2%) and 37 petrol-hybrid vehicles (5%). A further 34% of the ACT Government's passenger vehicle fleet are diesel vehicles.
- The 'ACT Public Service Passenger and light commercial vehicle management guidelines' require fleet managers/agencies to "prefer the vehicle that has the highest star rating under the Green Vehicle Guide. Unless justified by operational reasons preference should be given to vehicles with a minimum 3.5 star rating".
- These policies are currently being reviewed to consider further cost and emission reductions across the ACT Government fleet. The ACT Government welcomes the opportunity to assist the Australian Government to implement energy efficiency into its fleet procurement.

## Tax policy

Question 24: How could taxes and charges for motor vehicle purchase and/or use be reformed to encourage the purchase and supply of more efficient vehicles?

- As indicated in the discussion paper, the Australia Government could consider reviewing the impact of the current system of a higher Luxury Car Tax (LCT) threshold for fuel efficient vehicles to determine whether this has encouraged additional purchases of more efficient vehicles. However, it is noted that the LCT applies to a relatively small proportion of imported vehicles and as such, other financial incentives are likely to be more effective.
- The ACT already has a differential duty scheme for new light vehicles based on CO<sub>2</sub> emissions. New vehicles that emit less than 130g of CO<sub>2</sub> per kilometre pay zero duty on the purchase price. The ACT is considering amending this scheme to better include motorcycles.
- The ACT also provides registration concessions for electric and gas powered vehicles. New electric vehicles pay no duty on the purchase price and receive at least a 20% concession on registration. Gas powered vehicles are also eligible for at least a 20% discount on registration. The gas registration concession is to help offset the annual costs associated with gas inspection that is currently required.

- Care should be adopted when reviewing any taxes and charges concessions to encourage more environmentally friendly/ fuel efficient vehicles so that this does not adversely affect other areas of government policy.
- Currently most vehicles (including electric vehicles) provided for the use of an employee (where that vehicle is available for personal use) are subject to Fringe Benefit Tax (FBT). The common exception is 1 tonne utes. Many employees 'salary sacrifice' vehicles and incur a cost equivalent to the FBT amount. The Australian Government could examine exempting EVs from FBT to stimulate uptake by reducing the real (post tax) cost of EVs, for employers and employees, relative to non-exempt equivalently priced vehicles. Care should be adopted so that this does not adversely affect other areas of government policy.

### Alternative Fuels and electric vehicles

Question 26: What measures could be adopted to improve consumer awareness of the benefits of alternative fuelled and electric vehicles, particularly where they complement environmental benefits?

- Quickly establishing charging infrastructure is important for helping consumers accept that EVs are viable (i.e. addressing range anxiety). The EV market includes a diverse range of participants that interact across it; including vehicle suppliers, companies wanting to install / operate charging infrastructure, charging infrastructure providers, electricity market participants, fleet operators and private users. Due to the recent evolution of the market, there is an understandable absence of forums in which these issues can be examined holistically. Consideration could be given to establishing an overarching roadmap or national approach through the Transport and Infrastructure Council future work program.
- The Australian Government could examine through existing intergovernmental forums, changes to the automotive mechanics (if not already incorporated) as mandatory elements of the national vocational education and training curriculum.
- Given the high purchase price but low operating costs, most consumers will need to own and operate an EV for 5 to 7 years in order for the total cost of ownership to be favourable (compared to an internal combustion vehicle). However, some consumers will be concerned that a vehicle will last that long without incurring additional maintenance cost; with particular concerns regarding the battery and drive trains.

Question 27: What measures could be adopted to encourage the supply of alternative fuelled vehicles and supporting infrastructure, to reduce emissions from road transport?

- Improving the environmental performance of infrastructure and transport systems – (including mitigating transport emissions) already forms part of the Transport and Infrastructure Council's strategic priorities.
- Further consideration could be given to undertaking additional work plan activities under the environmental performance theme such as requirements to stimulate infrastructure associated with alternative fuelled vehicles such as a standardised or harmonised 'plug' for electric vehicles could support uptake.
- State / territory jurisdictions can continue to increase the efficiency of traffic movement and influence travel behaviour by encouraging demand shift from driver only car use and reducing the number and length of journey's made by car. For example, the ACT continues

to invest in planned changes to public transport, smart parking management and improved facilities for walking and cycling to change behaviour. In particular walking and cycling represent zero emission modes which can be an effective choice for short trips.

- In the ACT, the Capital Metro light rail project will enhance this public transport network, with connectivity being a key focus. Capital Metro journeys will be emissions-free as the ACT procures 90% electricity from renewable resources by 2020 (<http://www.legislation.act.gov.au/di/2013-271/default.asp> ) with a commitment from the current government to achieve 100% electricity from renewable sources by 2025.