Submission to the Federal Government

BMW Group Response:

Vehicle Emissions Discussion Paper

April 2016

Prepared by

BMW GROUP Australia

BMW Group Australia
783 Springvale Road
Mulgrave
Victoria 3170
Australia

Contact:
John Fairman
Corporate Strategy & Customer Executive
[redacted]

Table of Contents

1.0 Executive Summary

BMW Group Australia is a global leader in sustainability and a major participant in the Australian automotive market. It welcomes the opportunity to contribute to the Ministerial Forum on Australian Emission Standards.

As a primary premium vehicle importer into Australia, BMW Group Australia remains committed to the Australian market through a nation-wide network of dealerships and its large investment in industry-leading corporate and dealer facilities, employment and training.

This submission is in response to the Discussion Paper on Vehicle Emission Standards released by the Federal Government on 11 February 2016. BMW Group Australia addresses questions raised in the paper on which the company has a position and/or can offer information.

BMW Group's submission can be summarised as follows:

- ***Introduction of Euro 6***

BMW Group Australia supports Euro 6 as an Australian emission standard for passenger cars from 2020. We maintain any move to mandate Euro 6 should also include a mandated CO_2 standard as well as a concomitant Australian petrol fuel standard to a minimum 95 RON and maximum 10ppm sulphur.

- ***Fuel Efficiency (CO2) Standards***

BMW Group Australia supports a mandatory Australian CO_2 emission target for passenger cars. This should take into account the unique aspects of the Australian new car market.

- ***Fuel Quality Standards***

BMW Group Australia believes the vehicle and its fuel are an 'integrated system' and neither can be considered in isolation if optimal levels of CO_2 and other pollutant emissions are to be achieved.

- ***Emissions Testing***

A move to 'real world' representation of CO_2 and pollutant emissions of new vehicles should be considered as a supplementary measure only. It is not a replacement for the controlled tests currently conducted by the New European Drive Cycle (NEDC).

- ***Complementary Measures***

BMW Group Australia believes it is possible to send market signals that Low Emission Vehicles (LEV) and green vehicle technology is desirable and achievable. The success of the adjusted threshold for Luxury Car Tax (LCT) applicable to 7.0l/100km consumption and below, suggests amended thresholds for greater fuel efficiency should be considered or that the LCT be repealed altogether, being a largely anachronistic and discriminatory tax.

There is an opportunity to utilise existing government mechanisms for funding of green projects to assist the roll out of supporting infrastructure. The Clean Energy Finance Corporation (CEFC) is one such mechanism.

2.0 Introduction

2.1 About BMW Group

With the BMW, MINI and Rolls-Royce brands, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. As a global company, the BMW Group operates 30 production and assembly facilities in 14 countries and has a global sales network in more than 140 countries.

In 2015, the BMW Group sold approximately 2.247 million vehicles and nearly 137,000 motorcycles worldwide and had a workforce of 122,244 employees worldwide.

Acknowledged as a world-wide industry leader in sustainability and electromobility, BMW Group vehicles meet the most stringent environmental standards applicable in any market.

BMW Group's position in various independent sustainability ratings compellingly demonstrates its sustainability performance. In 2015, the BMW Group ranked strongly in several sustainability indices and received a number of awards[1]:

- BMW Group is the Dow Jones Sustainability Index leader for the ninth time since the Index was introduced in 2005. It remains the only company in the automotive industry to be listed.

- On the Global 500 rating of the Carbon Disclosure Project (CDP), the BMW Group achieved, for the third consecutive year, 100 out of a possible 100 points for transparent reporting. As a result, the BMW Group is listed on the worldwide Climate Performance Leadership Index (CPLI) of companies with Performance Score A – this makes the BMW Group one of only three companies worldwide to have been awarded an A in the CDP for the sixth time.

- The BMW Group was again listed on FTSE4Good in 2015, an index of sustainability and corporate governance provided by FTSE in London.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

[1]BMW Group Sustainable Value Report 2015, https://www.bmwgroup.com/en/responsibility/sustainable-value-report.html, p16

2.2 About BMW Group Australia

BMW Group Australia was established as a direct subsidiary of BMW AG in 1979, and in 2015 delivered 28,364 passenger cars under the BMW and MINI brands and 3,258 BMW brand Motorcycles.

BMW Group Australia has 43 automotive dealerships and an additional 27 motorcycle dealers nationally. The company and associated entities directly employ over 550 staff in Australia and the national dealership network employs over 2,000 staff

As a direct participant in the Australian market for 37 years BMW Group Australia is one of the country's primary premium vehicle importers. BMW Group Australia welcomes the opportunity to participate in the discussion process around the Review.

3.0 Vehicle Emissions

All current BMW Group vehicles already meet Euro 6 and BMW Group Australia would support introduction of a progressive plan to introduce Euro 6 as the minimum mandatory Australian standard.

Introduction of Euro 6 could closely follow the current phased introduction of Euro 5, which is currently scheduled for November 2016.

BMW Group Australia believes any move to mandate Euro 6 should also include both a mandated CO_2 target, and a concomitant Australian fuel quality standard to provide 95 RON and 10ppm sulphur for all grades of fuel. If approached as integrated package in this manner, the introduction of Euro 6 could be scheduled for market introduction in Australia from 1 January 2020.

BMW Group Australia supports the position of the Federal Chamber of Automotive Industries (FCAI) as outlined in its Fuel Quality Standards submission to the Senate Inquiry into Motor Vehicle Standards (Cheaper Transportation) Bill 2014 on 18 September 2015.

The FCAI has been consistent in its position that to extract the full benefits of a Euro 6 standard, and for vehicles to achieve a mandated CO_2 target, a concomitant fuel standard that is aligned with the most stringent international standards must also be introduced. Without an improvement in the minimum Australian fuel quality standard to 95 RON and 10ppm sulphur for all grades of fuel, the opportunity to achieve significant environmental, air quality and health benefits from the introduction of Euro 6 emission technology will not be realised. Australian consumers will also continue to pay a premium for the improved emissions technology in vehicles, without receiving the full benefit of the technology.

The U.S. EPA Office of Transportation and Air Quality (OTAQ) will launch its 'Tier 3' program in 2017 to reduce air pollution in passenger cars and trucks. The Tier 3 program "considers the vehicle and its fuel as an integrated system"[2] and will seek to lower vehicle emission standards in conjunction with a reduction in the sulphur content of petrol to 10 ppm.

Tier 3 is among the most highly cost-effective air quality control measures available.[3]

[2] U.S. Environmental Protection Authority, Office of Transportation & Air Quality (OTAQ) - www.epa.gov/otaq/tier3

Recommendations

a) Pollutant emission standards (i.e. Euro 6), CO_2 targets and fuel quality standards cannot be considered in isolation. They are all interrelated.

b) BMW Group supports implementation of Euro 6 as an Australian market emission standard for passenger vehicles from 2020 or as soon as practicable thereafter.

c) In the interests of achiever urban air quality improvements more broadly, BMW Group Australia further believes that supplementary measures should be implemented to progressively remove aged heavy vehicles (for example, vehicles registered before 1995 and therefore not subject even to Euro 1 requirements) from the operational Australian vehicle fleet.

4.0 Fuel Efficiency (CO_2) Standards for Light Vehicles

New light vehicles in Australia contribute approximately 10% of Australia's CO_2 emissions. Total transport including road, rail and air is approximately 17%.

Improvements in technology and shifts in market sales mix have already resulted in marked reductions in new vehicle fuel consumption and consequent CO_2 emission levels. From 2005 to 2014, CO_2 emissions from new light vehicles reduced by 22%, or an average of 2.4% per year. As vehicle sales mix and market conditions stabilise, it is likely that this trend will continue, but at a decelerated pace, unless supplementary measures are adopted.

BMW Group Australia shares the view of the FCAI and supports a mandatory Australian CO_2 emission target. This is regarded as an important first step in a more extensive dialogue to address critical 'levers' (including those below), before such a target can be finally established and implemented:

- Vehicle segmentation;
- Agreed CO_2 measurement basis and mechanisms;
- Introduction timing and staging;
- Credits and/or incentive schemes;
- Enforcement processes.

It is important to note that Australia cannot use a 'cookie-cutter' approach to CO_2 targets. Australia is its own unique market and any proposed standards need to reflect those differences.

The latest CO_2 emission intensity report from the National Transport Commission has again highlighted the efficiency of BMW Group vehicles in Australia. BMW Group was identified as a leading performer in the Australian automotive industry with a corporate average CO_2 emissions intensity of just 149g/km for 2015[4].

Whilst the NTC report does highlight some variances between automotive CO_2 emissions in Australia and Europe, there are a number of factors that contribute to higher average CO_2 emissions from light vehicles in Australia when compared to Europe. These include[5]:

- Australian consumers' preference for heavier vehicles with larger more powerful engines;
- Australian consumers' preference for vehicles with automatic transmissions as opposed to manual;
- A lower proportion of diesel-powered engines;
- Significantly fewer government incentives;
- Lower fuel prices.

[4] National Transport Commission Australia, Information Paper: *Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2015*, March 2016, p13
[5] National Transport Commission Australia, Information Paper: Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2015, March 2016, p2

All of these factors, and more, demonstrate the need for detailed modeling to assist with the development of an Australia-specific CO_2 standard.

Recommendations
a) BMW Group Australia supports the introduction of a mandated CO_2 target for Australia to be introduced in conjunction with an emissions standard from 1 January 2020. b) An Australian CO_2 target for passenger cars will need to take into account the unique constitution of the Australian new car market. c) Australian cannot simply adopt an overseas CO_2 standard. d) Any fleet average target should recognise all light vehicle sectors – Passenger, SUV and Light Commercial Vehicles (LCV) and the market share of each in this market.

5.0 Fuel Quality Standards

BMW Group Australia is of the firm view that there are profound environmental and efficiency benefits to be gained from a petrol fuel quality standard that calls for a minimum of 95 RON and a maximum sulphur content of 10ppm. Not only are such higher quality fuels generally backwards compatible with the Australian car parc, they would also support the achievement of real world emission benefits through the progressive introduction of Euro 6.

The World Wide Fuel Charter (WWFC), of which BMW Group is a contributor through its membership of both the European Automobile Manufacturers Association (ACEA) and US Alliance of Automobile Manufacturers, provides fuel quality recommendations, "as a service to worldwide legislators, fuel users and producers".

WWFC conclusions are drawn from expert analysis, research and detailed data. Its overview of research conducted into the effects of octane and sulphur present the following findings:

Statements on octane[6]:

- "Vehicles are designed and calibrated for a certain octane rating."
- "When a customer uses gasoline with an octane rating lower than required, knocking may result. Engines equipped with knock sensors can handle lower octane ratings by retarding the spark timing, but this will increase fuel consumption, impair driveability and reduce power, and knock may still occur."
- "Increasing the minimum octane rating available in the marketplace has the potential to help vehicles significantly improve fuel economy and, consequently, reduce vehicle CO_2 emissions."

Statements on sulphur[7]:

- "Sulphur has a significant impact on vehicle emissions by reducing the efficiency of catalysts."
  .
- "Sulphur also adversely affects heated exhaust gas oxygen sensors."
- "Reductions in sulphur will provide immediate reductions of emissions from all catalyst-equipped vehicles on the road."

[6] European Automobile Manufacturers Association (ACEA), Alliance of Automobile Manufacturers, Truck and Engine Manufacturers Association (EMA), Japan Automobile Manufacturers Association (JAMA), World Wide Fuel Charter, Sept. 2013, 5th Edition, www.acea.be, p17
[7] ibid

The parameters for various fuel categories, with specific relevance to Australia, which should be considered when determining an Australian gasoline octane rating and associated sulphur levels for proposed emissions (ADR 79/05 or Euro 6) and fuel consumption standards[8] are:

Category 4

Markets with advanced requirements for emission control, for example, markets requiring US Tier 2, US Tier 3 (pending), US 2007 / 2010 Heavy Duty On-Highway, US Non-Road Tier 4, California LEV II, EURO 4/IV, EURO 5/V, EURO 6/VI, JP 2009 or equivalent emission standards. Category 4 fuels enable sophisticated NOx and particulate matter after-treatment technologies.

Category 5

Markets with highly advanced requirements for emission control and fuel efficiency, for example, those markets that require US 2017 light duty fuel economy, US heavy duty fuel economy, California LEV III or equivalent emission control and fuel efficiency standards in addition to Category 4-level emission control standards.

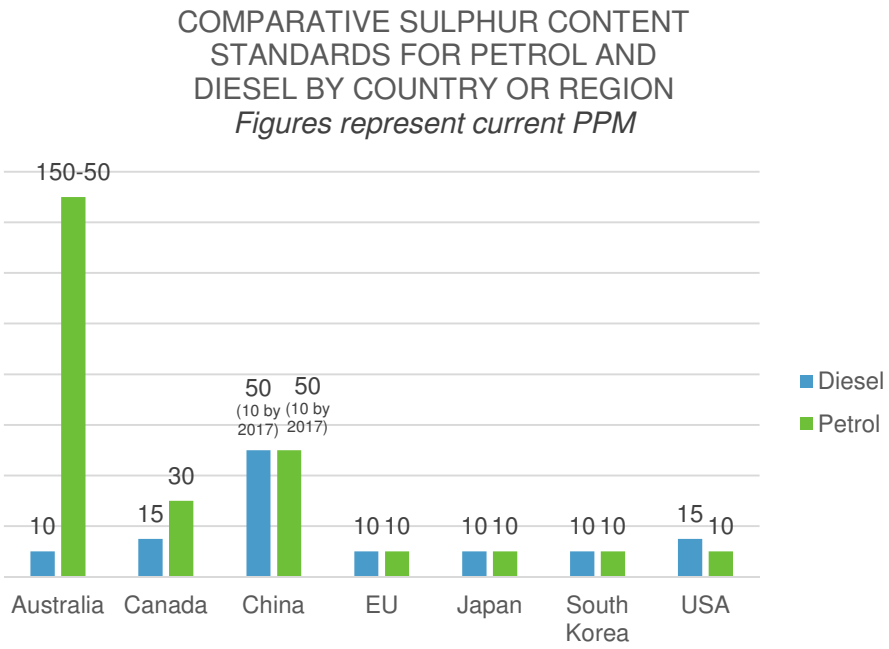
Category 4 & 5 call for a maximum Sulphur content of 10ppm and Category 5 gasoline specifies a minimum 95 RON[9].

The current Australian market quality fuel standards are lower than recommendations provided by the WWFC. A maximum Sulphur standard of 10ppm would not only align Australia with the US and Europe, but also with both Japan and South Korea (see Figure 5.1). In combination, these source markets account for approximately 65% of the annual Australian new passenger car and light commercial vehicle sales.

The current Australian diesel fuel standard is already amongst the world's most stringent.

[8] European Automobile Manufacturers Association (ACEA), Alliance of Automobile Manufacturers, Truck and Engine Manufacturers Association (EMA), Japan Automobile Manufacturers Association (JAMA), World Wide Fuel Charter, Sept. 2013, 5th Edition, www.acea.be, p1
[9] Ibid, p.6,7

Figure 5.0 – Global Comparative Sulphur Content Standards[10]:



Source: ICCT & DieselNet via TransportPolicy.net

The need for a minimum 95 RON and maximum sulphur content of 10ppm to complement emission standards and CO2 targets is widely recognised.

In its inaugural 'State of Clean Transport Policy' report, The International Council on Clean Transportation (ICCT) states:

"*Advancing to world-class vehicle emission standards (with stringency equivalent to Euro 6/VI or better) paired with requirements for low sulphur fuel can dramatically reduce emissions of local air pollutants and associated health impacts, even amid growth in vehicle activity*"[11]

The European Commission maintains, "*Fuel quality is an important element in reducing greenhouse gas emissions from transport.*"[12]

The U.S. EPA considers "*the vehicle and its fuel as an integrated system.*"[13]

[10] 2014 figures from www.TransportPolicy.net – a collaboration between The International Council on Clean Transportation (ICCT) & DieselNet, http://transportpolicy.net/index.php?title=Global_Comparison:_Fuels
[11] The International Council on Clean Transportation, 'State of Clean Transport Policy', http://www.theicct.org/sites/default/files/publications/ICCT_StateOfCleanTransportPolicy_2014.pdf, p7
[12] European Commission (EC), Climate Action, 'Road Transport: Reducing CO2 emissions from vehicles', http://ec.europa.eu/clima/policies/transport/vehicles/index_en.htm
[13] U.S. Environmental Protection Authority, Office of Transportation & Air Quality (OTAQ) – Regulatory Announcement Fact Sheet - https://www3.epa.gov/otaq/documents/tier3/420f14009.pdf p2

There is little rationale for continuing to allow such a high sulphur content in Australian fuel past a Euro 6 phase-in date of 2020. It is understood that Australian refineries are currently capable of producing fuel close to a 10ppm standard, however consistency under peak production periods may be an issue.

Consultation will need to take place with the fuel industry regarding a suitable 95 RON / 10ppm phase-in timetable. It is important to highlight that the Australian community will not reap the benefits of Euro 6 emission standards without an equivalent and sustained improvement in Australian fuel quality.

Recommendation

a) Australian petrol fuel quality should be aligned with that of the cleanest standards in similar developed markets. This would require a minimum 95 RON and a maximum sulphur content of 10ppm (in alignment with Euro 6).

b) The introduction of the aforementioned fuel quality standard will need to be market-ready for the phase in of Euro 6 and an equivalent CO_2 target from 1 January 2020.

6.0 Motorcycles

BMW Motorrad is the premium motorcycle brand of the BMW Group. It has pioneered technical innovations throughout its 94 year history, including the introduction of the world's first closed-loop three-way catalytic converter in 1991 which remains standard fitment across the range.

In 2015, BMW Motorrad delivered 136,963 motorcycles and maxi-scooters worldwide. BMW Motorrad Australia sold 3,258 units in 2015, approximately 3% to the overall 108,711 road / off road motorcycles delivered in Australia (according to the FCAI). Of that total of 108,711 new motorcycles only 45,013 (41.4%) were road motorcycles.[14]

The Australian Bureau of Statistics estimates that there are approximately 800,000 motorcycles registered out of the registered 18 million vehicles[15]. Motorcycles therefore represent 4.5% of the total registered vehicle fleet.

In addition, the Discussion Paper notes that motorcycles account for less than 1% of total vehicle kilometers travelled (VKT) and are estimated to account for a comparably small volume of emissions.

Given the small size of the Australian market, the frugal fuel use of motorcycles (and therefore low contribution to total CO_2 emissions) coupled with the predominant use of registered motorcycles for recreation and off-road use, BMW Group believes it would be counter-productive to impose an emissions standard or CO_2 target for motorcycles.

The motorcycle industry is already largely 'self-regulating' with the majority of motorcycles Euro 3 compliant. BMW Motorrad motorcycles on offer in Australia in the main, already meet Euro 4 compliance given the stringent standards in other, larger markets.

Recommendation
a) The Australian motorcycle market is too small to impose emission standards and CO_2 targets. Standards imposed in larger markets will benefit Australia in due course. b) Motorcycles, on average, use significantly less fuel per km travelled than a light vehicle and therefore emit significantly lower levels of CO2 and emissions. In addition, motorcycles are predominantly used for recreational transport and as such account for less than 1% of total VKT.

[14] FCAI media release, "Australia's motorcycle market steady in 2015", www.fcai.com.au, 8 January 2016
[15] Australian Bureau of Statistics, 9309.0 - Motor Vehicle Census, Australia, http://www.abs.gov.au/ausstats/abs@.nsf/mf/9309.0, 31 January 2015

7.0 Emission Testing

Australian emission testing standards are currently determined under controlled conditions using the New European Drive Cycle (NEDC). It is expected that the NEDC will soon be replaced by the Worldwide Harmonised Light Vehicles Test Procedure (WLTP)[16].

The WLTP has been in development through the UN Economic Commission for Europe (UN ECE) since 2007[17]. The objective of the WLTP is to represent "typical driving characteristics from around the world"[18]. However, it is important to note that in order to achieve 'real world' data there may be some impact on the current CO_2 targets around the world following changes to the testing procedure. The WLTP will engage a series of more specific and robust testing parameters, such as a longer driving cycle, higher maximum, higher average speeds and stronger acceleration than the current NEDC platform.[19]

The stringent parameters of the NEDC, and soon to be WLTP, provide a commonality of testing across all vehicles, which can only be achieved with the exacting measures available to a laboratory test. As outlined by the International Council on Clean Transportation in 2014:

"For more than fifty years, vehicles have been tested in controlled laboratory environments to determine their official emission values.

"There is a good reason for this: In a vehicle laboratory, technicians can control important influencing factors, such as ambient temperature and vehicle speed trace, and thereby ensure reproducibility and comparability of results."[20]

Any attempt to introduce a real world Australian emission test, in-line with the recommendations of the European Real Driving Emissions (RDE) test, should only be considered a supplementary measure to, not a replacement of, the current certification test.

Recommendations
a) Australia should continue its policy of harmonising with UN regulations on this matter.
b) The introduction of any Australian 'real world' test should be considered as a supplementary measure only.

[16] The development of the WLTC was carried out under a program launched by the World Forum for the Harmonization of Vehicle Regulations (WP.29) of the United Nations Economic Commission for Europe (UN-ECE). The WLTP Technical Report can be found via: https://www.unece.org/fileadmin/DAM/trans/doc/2014/wp29grpe/GRPE-68-03e.pdf
[17] The International Council on Clean Transportation (ICCT), "The WLTP: How a new test procedure for cars will affect fuel consumption values in the EU", Working Paper 2014-9, October 2014, p2
[18] UN/ECE/WP.29/GRPE/WLTP-IG/DHC Subgroup, "Development of a Worldwide harmonized Light duty driving Test Cycle (WLTC)", December 2013, https://www.unece.org/fileadmin/DAM/trans/doc/2014/wp29grpe/GRPE-68-03e.pdf p2
[19] The International Council on Clean Transportation (ICCT), "The WLTP: How a new test procedure for cars will affect fuel consumption values in the EU", Working Paper 2014-9, October 2014, p7
[20] ibid, p.1

8.0 Complementary Measures

The majority of developed world markets offer at least some short-medium term incentives for consumers to purchase Low Emission Vehicles (LEV) or Zero Emission Vehicles (ZEV), while also offering incentives to help develop the supporting, longer-term infrastructure for new technology 'green' cars.

Accelerated and lasting changes in consumer behavior seldom occur without some external and sustained incentives.

There are a range of financial and practical incentives that could be used to send clear market signals that a move to green motoring is desirable and achievable.

The importance of establishing a critical mass of ZEVs, PHEVs and other green technologies in the market cannot be underestimated. General consumer (as opposed to 'early adopters') comfort with new technology and acceptance as a viable option for their needs is heavily influenced by a belief that a new technology is tested in-market and fully supported.

The current lack of any significant incentive for the purchase of LEV / ZEV acts, in effect, as a disincentive to increased consumer take-up and the development and investment in the associated supporting infrastructure.

The 'barriers to purchase' in the Australian market are numerous. A limited electric and alternate fuel model range, residual value concerns and, in particular, a lack of consumer awareness of the benefits of electric vehicle ownership, demonstrate the need for complementary measures in conjunction with electric vehicle policy.

There is considerable scope for a discussion on achievable and effective incentives, as well as the associated qualifying criteria for such incentives.

Outlined below is a chart detailing some of the key incentives available to purchasers of new technology green vehicles in other markets[21]:

[21] The International Council for Clean Transportation White Paper: A Collaborative Agenda for the Transition to a Zero-Emission Vehicle Fleet, http://www.theicct.org/sites/default/files/publications/ICCT_GlobalZEVAlliance_201509.pdf September 2015, p.17

Figure 8.0 – Comparative Incentives of Government Electric Vehicle Promotion

Area	Action	China	France	Germany	Japan	Netherlands	Norway	UK	US (ex. California)	California
Global Market Share	Vehicle sales in 2014 (x million)	22	2.2	3.3	4	0.5	0.2	2.6	14	1.7
	Vehicle manufacturing in 2014 (x million)	22	1.7	5.7	10	<0.1	<0.1	1.6	11	<0.1
	Percent of 2014 global electric vehicle sales	17	4	4	10	5	6	5	19	19
Consumer Purchase	Vehicle purchase subsidy (tax credit)								X	
	Vehicle purchase subsidy (rebate)	X			X			X		X
	Vehicle purchase tax exemptions					X	X		/	
	Vehicle fee-bate scheme		X					X		
	Government fleet vehicle purchasing preferences		X		X			X	X	X
	High fuel price and greater savings		X	X		X	X	X		
Consumer Use	Annual vehicle fee exemption			X	X	X	X	/	/	
	Discounted / free electric charging				X	X	X	/	/	X
	Preferential lanes (e.g. bus/HOV) access			/		X	X		/	X
	Reduced roadway tax or tolls			X	X	X	X	X		
	Preferential parking access		/	/		/	/	/	/	/
Fuel Provider, Infrastructure	Carbon pricing scheme	X	X	X	X	X	X	X	/	X
	Low carbon fuel incentive for electricity providers							/		X
	Public charging network funding	X	X	X	X	X	X	X	X	X
	Home charging equipment incentives		X						/	/
Consumer Awareness	Public outreach activities designed to educate on consumer benefits	X	X	X	X	X	X	X	X	X

"/" signifies smaller local or regional program

8.1 Fleet Purchasing Policy

BMW Group Australia believes that there is a valid and necessary leadership role for Government in driving and influencing consumer behaviour. Government procurement policy can be an important part of that leadership role.

Governments at all levels need to lead by example, helping new technology green vehicles reach critical market mass faster. Procurement guidelines should be amended to ensure that the purchase of fit-for-purpose ZEV, PHEVs, LEVs and new green technology vehicles is considered a priority.

If Government fleets adopt a 'Green' vehicle procurement approach, they will also generate the business case for creating new technology infrastructure. Such infrastructure could also be used for other public and private use, which in turn creates a greater incentive for private purchase.

When considering the global perspective, Governments around the world are showing leadership by supporting emerging new technology green vehicles within government fleets:

- In July 2014, the UK Government announced funding for all its fleets to introduce plug-in cars and vans. The £5 million low emission vehicle (ULEV) readiness project was the first step in plans to make electric cars and other plug-in vehicles commonplace in government fleets[22].

- In March 2015, President Barack Obama announced an Executive Order – Planning for Federal Sustainability in the Next Decade. By December 2020, 20% of all new federal agency vehicles would be zero emission vehicles or plug-in hybrid vehicles account[23].

The availability of ZEV, PHEVs and LEVs on the Australian market is increasing with each model cycle and with the introduction of new participants in the market.

The latest LEVs deliver significantly lower consumption levels than the initial hybrid offerings. PHEVs with significantly increased range of operation, using only electrical power, deliver remarkably low consumption and emission figures. In addition, major manufacturers are introducing either full Electric Vehicles (EVs) or Range Extender (REX) vehicles that can deliver zero or close to zero emissions.

[22] UK Government, Department for Transport, Office for Low Emission Vehicles, Media Release: 'Electric cars for all government fleets', https://www.gov.uk/government/news/electric-cars-for-all-government-fleets
[23] US General Services Administration, Electric Vehicle Pilot Program, http://www.gsa.gov/portal/content/281581

8.2 Taxation Measures

BMW Group Australia believes there is a valid and necessary role for Government to play in influencing consumer behavior and that the cost in doing so need not be of material impact on Government expenditure.

Currently some zero and extremely low emitting vehicles attract Luxury Car Tax (LCT).

BMW Group Australia would propose all ZEVs, and potentially some PHEVs, be exempt from LCT. While the removal of LCT from a small number of such models in the market would make only a small impact on revenue, it would send a strong signal to the market that such vehicles are a socially and environmentally desirable alternative.

The introduction of a higher LCT threshold for fuel efficient vehicles (7.0 litres/km or below) saw a marked increase in fuel efficient vehicles being introduced to the market. This in turn enabled greater consumer access to fuel efficient, low emission vehicles, most often to replace older and less efficient vehicles, resulting in emission benefits for the community.

It is now timely and more than appropriate to further incentivise the market to embrace even lower average fuel consumption, or alternatively, repeal the tax altogether as a largely anachronistic and discriminatory basis.

Should incentives be the preferred option, BMW Group Australia believes there is an opportunity to add further value by increasing the LCT threshold for vehicles that demonstrate superior fuel efficiency, such as PHEVs and ultra-efficient petrol and diesel models.

Subject to detailed industry consultation and feedback, a sliding scale qualifying rate for higher LCT thresholds could be set at 5-6l/100km (or the appropriate NEDC/WLTP CO_2 level) with all ZEVs exempt from LCT.

BMW Group Australia would also like to encourage discussions within COAG and the broader community, on the value of providing significant reductions in State vehicle registration and State stamp duty costs applicable to qualifying green vehicles.

8.3 Alternative Fuels and Electric Vehicles - Infrastructure

As outlined, the availability of ZEVs and LEVs on the Australian market is increasing with each model cycle and with the introduction of new participants in the market.

BMW Group Australia believes there is an opportunity to utilise existing government mechanisms for funding of green projects to assist the roll out of supporting infrastructure, as part of a government policy of acting as a catalyst for positive change.

The Clean Energy Finance Corporation (CEFC) is one such mechanism and its brief would appear to support a role in assisting new green motoring technology roll-out.

According to the CEFC website, "*The CEFC's mission is to accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction.*

"Using a full range of financial instruments, the CEFC co-finances and invests, directly and indirectly, in clean energy projects and technologies." [24]

Engaging with the CEFC could assist with the roll-out of green energy recharge / refueling stations. A logical avenue of progress could be to work with established refueling infrastructure providers, who already have a national network, to augment their facilities with new technology refueling/recharging capability.

In addition, as previously outlined, if Government fleets adopt a Green vehicle procurement approach, they would also generate the business case for establishing their own new technology infrastructure. The infrastructure could be offered for private use, in turn creating a greater incentive for private purchase.

Recommendations

Government 'Green' Fleet Procurement

A review of vehicle procurement policies by all levels of Government (Federal, State, and Local) with a view to selection of zero emission or low emission vehicles, where fit-for-purpose.

State and Local Government Incentives

a) A range of State and Local Government incentives should also be further explored. These could include access to:

- Transit lanes;
- Registration and/or stamp duty relief
- Free or reduced cost parking;
- Free or reduced cost access to charging facilities.

b) Practical, localised incentives would provide a valuable short-term incentive to encourage the up-take of ZEVs and PHEVs

Luxury Car Tax

BMW Group recommends incentive measures designed to drive consumer recognition of and demand for zero and low emission vehicles, such as:

- Zero LCT on ZEV and very low emission/PHEV vehicles (potentially with consumption levels in the order of 5.0-6.0 l/100km) to be implemented in conjunction with a CO_2 consumer incentive scheme with reduced sales taxes and/or higher LCT thresholds based on low CO_2 emission performance.

[24] Clean Energy Finance Corporation, http://www.cleanenergyfinancecorp.com.au/about.aspx

- Consider repealing the LCT altogether on the basis that it is largely an anachronistic and discriminatory tax.

Alternative Fuels and Electric Vehicles – Infrastructure

- Utilise existing government mechanisms for funding of green projects to assist the roll out of supporting infrastructure, as part of a government policy of acting as a catalyst for positive change.

  The Clean Energy Finance Corporation (CEFC) is one such mechanism and its brief would appear to support a role in assisting new green motoring technology roll-out.

- Consideration of taxation or other indirect incentives that could provide greater impetus for the development of zero emission or low emission vehicle recharging or refuelling infrastructure.