

Dr Anna Mortimore addressing Senator Pocock's 'questions on notice'

31 August 2022

Senate Economics Legislation Committee
Public Hearing 25 August 2022
Parliament of Australia

Response from Dr Anna Mortimore (Griffith University) to the following "questions on notice" from Senator Pocock. Commentary on 25 August 2022. (Page 16 of the Proof Hansard 25 August 2022)

Question on notice

1. "Do you have a view on whether or not this should have a sunset clause?"

The 'question on notice', refers to the comment on the 'sunset clause' in relation to Dr Kraal's comment "... that its only zero-emission cars and in the van and ute class should be exempt from FBT. "

Response

Explanatory Memorandum to the FBT EV exemption shall apply to cars that are: (paragraph 1.6)

- Battery electric vehicles.
- Hydrogen fuel cell electric vehicles; and
- Plug in hybrid electric vehicles.

Collectively referred to as zero or low emission vehicles.

It was proposed in Submission 22 to refer to battery electric vehicles and plug in hybrid electric vehicles as "plug in electric vehicles" or PEVs.

Sunset clause for plug-in hybrid electric vehicles (PHEVs)?

Should there be a 'sunset clause' for plug in hybrid vehicles, being exempt from FBT under the tax change that applied from 1 July 2022?

Whether a 'sunset clause' should apply in exempting FBT for PHEVs, the following issues and targets set by the Australian Government should be considered:

- In ALP's 2021 National Electric Vehicle Strategy, EV sales are expected "to increase" to 89% of new car sales by 2030, with transport emissions reducing by 4 Mt in 2030.¹ The uptake of EVs includes full electric, plug in hybrids, and fuel cell vehicles.²

¹ RepuTex Energy, "The Economic Impact of the ALP's Powering Australia Plan, Summary of modelling results, December 2021" 1-41;30

² Ibid

- In the Bills – Treasury Laws Amendment (Electric Car Discount) Bill 2022, second reading, Dr Chalmers refers to PHEVs³:
 - There are only 10 BEV and PHEV on the domestic market selling for less than \$60,000, compared to two dozen in the UK. With the passage of this legislation, Australia will too.”
 - About 15% of cars sold in the UK are electric and plug-in hybrids. In Australia its only about two percent.
- Although Australia increased its uptake of EVs to 2% in 2021, 1.4% of the increase were sales of Tesla vehicles to high end consumers, and above EV uptake includes PHEVs.⁴
- Under the current policy settings, the FBT EV exemption will most likely see a further increase of EVs to high end consumers, given the lack of supply of affordable EVs.
- EV manufacturers are supplying EVs to countries with regulatory standards, and Australia is the only OECD countries without regulatory CO2 emission standards.⁵
- Regulatory standards control the ‘supply of EVs’ by requiring the car industry to increase the sales of EVs and decrease the sales of Internal Combustion Engine Vehicles (ICEVs). Without regulation there is no requirement for the Australian car industry to increase supply of more affordable EVs.
- With no regulatory CO2 emission/ fuel efficiency standards, Australia’s national average CO2 emission intensity for passenger and light SUVs was 149.5g/km, in 2020, which is 57% higher than the EU regulatory CO2 emission standards of 95g of CO2/km which applies from 2021 to 2024.⁶
- In 2020, the average CO2 emission intensity was the lowest for⁷
 - Government car fleets (134 g/km) followed by
 - Private buyers (155 g/km) and
 - Business buyers (159 g/km)
- The Federal Climate Change and Energy Minister, Chris Bowen, will soon release ‘a discussion paper’ on introducing regulatory CO2 emission standards. Meanwhile the FBT EV exemption applied from 1 July 2022 and will be reviewed after three years.

³ Dr Chalmers, Bills- Treasury Laws Amendment (Electric Car Discount) Bill 2022 – Second Reading.

⁴ Electric Vehicle Council, “State of Electric Vehicles – March 2022”.

<https://electricvehiclecouncil.com.au/reports/state-of-electric-vehicles-march-2022/>

⁵ Jetcharge, “Where are Australia’s fuel efficiency standards?” 2019, <https://jetcharge.com.au/fuel-efficiency-emissions-standards-australia/>

⁶ European Commission, CO2 emission performance standards for cars and vans.

https://ec.europa.eu/clima/eu-action/transport-emissions/road-transport-reducing-co2-emissions-vehicles/co2-emission-performance-standards-cars-and-vans_en

⁷ National Transport Commission, 2021, “Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2020”

<https://www.ntc.gov.au/sites/default/files/assets/files/Carbon%20dioxide%20emissions%20intensity%20for%20new%20Australian%20light%20vehicles%202020.pdf>

Is a sunset clause to exempt PHEVs from FBT required?

Introducing a sunset clause, as to whether PHEVs ought to be exempt from FBT is not warranted given the above. However, the uptake of PHEVs needs to be controlled and monitored, as the reduction of nations average CO2 emissions intensity from road vehicles, is correlated to a higher uptake of BEVs as shown in the following Table.

Table 1. Market share of BEV and PHEV

- in Norway, Netherlands, United Kingdom and Germany

Details	Norway			Netherlands			United Kingdom			Germany			Australia	
	2021	2020	2019	2021	2020	2019	2021 ⁸	2020	2019	2021 ⁹	2020	2019	2021 ¹⁰	2020 ¹¹
Ave emissions	¹²	38.2g	59.9g		82.3g	98.4g		111g	127g		113.6g	131.2g	146.5g	149.5g
BEV & PHEV (%)	87.0	74.3	55.9	30.0	25.0	15.1	18.5	10.7	3.1	26.0	13.6	3.0	2.0	0.7
BEV (%)	65.0	54.3	42.4	20.0	21.0	13.9	11.6	6.6	1.6	13.6	6.7	1.8	1.9	0.5
PHEV (%)	22.0	20.0	13.5	10.0	4.0	1.2	7.0	4.1	1.5	12.4	6.9	1.2	.1	0.2

For average CO2 emissions https://www.acea.be/uploads/publications/ACEA_Pocket_Guide_2017-2018.pdf

European vehicle market statistics: https://theicct.org/sites/default/files/publications/ICCT_EU_Pocketbook_2020_Web_Dec2020.pdf

V Klesty, Reuters, Norway in 2020: <https://www.reuters.com/article/us-autos-electric-norway-idUKKBN29A0ZT>

European vehicle market statistics 2020/2021. <https://theicct.org/wp-content/uploads/2021/12/ICCT-EU-Pocketbook-2021-Web-Dec21.pdf>

As shown in Table 1. sales and uptake of BEVs exceeds sales of PHEVs. In Australia, the uptake of BEVs exceeds the uptake of PHEVs as shown in Table 2.

⁸ Mark Kane, UK: Plug-in car sales Top 300,000 in 2021, Tesla Model 3 #2 Overall, <https://insideevs.com/news/559035/uk-plugin-car-sales-2021/>

⁹ Mark Kane, Germany; Almost 700,000 Plug-ins were sold in 2021, <https://insideevs.com/news/560910/germany-plugin-car-sales-2021/>

¹⁰ Federal Chamber of Automotive Industry, Media Release, 12 April 2022, <https://www.fc.ai.com.au/news/index/view/news/761#:~:text=The%20MA%20outcome%20for%202021,%2Fkm%20for%20MC%2BNA.>

¹¹ National Transport Commission, 2021, "Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2020" <https://www.ntc.gov.au/sites/default/files/assets/files/Carbon%20dioxide%20emissions%20intensity%20for%20new%20Australian%20light%20vehicles%202020.pdf>

¹² The 2021 average CO2 emissions for passenger vehicles and SUVs, for Norway, Netherlands, United Kingdom and Germany was not available at the time of preparing the submission.

Table 2. Emissions intensity and annual sales by electric vehicle type, 2019 and 2020¹³

Electric vehicle type	Average emissions intensity	Sales		% of PHEVs of total EVs
	2020	2019	2020	
PHEV	51	1,402	1,692	24%
BEV (other than Tesla)	0	1,523	1,778	26%
Tesla	0	2,950	3,430	50%
		5,975	6,900	100%

National Transport Commission, 2021, Carbon dioxide emissions intensity for new Australian light vehicles, 2020. <https://www.ntc.gov.au/sites/default/files/assets/files/Carbon%20dioxide%20emissions%20intensity%20for%20new%20Australian%20light%20vehicles%202020.pdf>

Sunset clause in exempting FBT for PHEVs can be based on electric charge and CO2 emissions

Tax changes, tax rates and subsidies are effective in influencing the uptake of BEVs in preference to PHEVs and ICEVs for employees who have a car benefit.

RACE for 2030 Report, reviewed the overseas jurisdictions tax policy and tax rates in determining the Company Car Tax for the UK, Norway, the Netherlands and Germany. For example, the UK company car tax rates for cars registered from 6 April 2020, were as follows.¹⁴

Table 3. UK company car tax rates

CO2 g/km	Electric range miles	2020-21 %	2021-22 %	2022-23 %	2023-24 %	2024-25 %
0	n/a	0	1	2	2	2
1-50	>130	0	1	2	2	2
1-50	70-129	3	4	5	5	5
1-50	40-69	6	7	8	8	8
1-50	30-39	10	11	10	12	12
51-54	<30	12	13	14	14	14
Then 1% increase for each 5g/km band up to the band below						
165-169		36%	37%	37%	37%	37%
170 +		37%	37%	37%	37%	37%

Rates apply for cars registered from 6 April, 2020

The company car tax rates apply until 2024-25. The zero-rate applied to BEVs and PHEVs for the 2020-21 income tax year, with zero rate applying to PHEVs on the condition that that CO emissions ranged from 1-50g/km and a pure electric range was of over 130 miles (209

¹³ National Transport Commission, 2021, op cit 11.

¹⁴ RACE for 2030 Report, Business Fleets and EVs: Taxation changes to support home charging from the grid, and affordability, 1-164:113, <https://www.racefor2030.com.au/fast-track-reports/#2>

kilometres). The tax rates increase progressively based on Co2 emissions, with the highest rate at 37%.¹⁵

Question on notice

2. What should the sunset clause be?

Response

A similar sunset clause could apply to the uptake of PHEVs, ensuring:

- Car industry supplies PHEV's with longer-electric range exceeding 30 miles (48 kilometres) and
- Progressive tax rates based on CO2 emissions to encourage uptake of BEVs and PHEVs.

Question on notice

3. Cost savings to fleet owners having electric vehicles. (Page 16 of the Proof Hansard 25 August 2022)

The need for the concession to also go to home charging infrastructure costs. "It would be great to see if you have looked at the cost savings to fleet owners from having electric vehicles in terms of maintenance, not having fuel cards and that so of thing versus the upfront cost of home charging infrastructure. I would like to see that."

Response

The RACE for 2030 Report involved Case Study Modelling in Section 7. In Case Study 1, we assumed the vehicle is garaged at home for the whole year round and modelled the TCO for the ICEV version of the Kona, followed for the equivalent estimations for the BEV version. We compared the data on the vehicle purchase prices, maintenance costs, and projected resale values provided from a Kona distributor. The costs, over a three-year period, were categorised as follows:

- acquisition cost (vehicle price, stamp duty and delivery charges. For BEV, included cost of home charging)
- operating costs (registration, comprehensive insurance, roadside assistance, replacement tyres, repairs and servicing)
- non-operating cost estimates (depreciation of EV, annual FBT for the car, FBT for the home charger and Income tax saving, (from claiming the tax concession).

The comparative costs of ownership for the Hyundai ICEV and BEV, is shown in Table 8.

¹⁵ Ibid, p 111.

Table 8. Comparative costs of ownership for Hyundai Kona ICE & BEV under different FBT scenarios and assumed operating conditions (AUD)¹⁶

Cost component (PV of costs over 3 years)	Statutory FBT			OC FBT		
	BEV	ICE	Difference	BEV	ICE	Difference
Car acquisition cost	64,037	31,329	32,708	64,037	31,329	32,709
Home charger	2,300		2,300	2,300		2,300
Operating costs	9,997	13,934	(3,936)	9,997	13,934	(3,936)
Resale value (revenue)	(32,215)	(17,123)	(15,093)	(32,215)	(17,123)	(15,093)
Income tax (savings/credit)	(11,411)	(7,585)	(3,826)	(11,411)	(7,585)	(3,826)
FBT (car)	33,188	16,235	16,953	12,047	8,017	4,030
FBT (home charger)	1,618		1,618	1,618		1,618
Total cost of ownership	67,513	36,789	30,724	46,373	28,572	17,801

The findings in Case Study 1 stated:

“Battery electric vehicle offer substantial savings in terms of operating costs over three-year period. However, these savings of \$3,936 (over a three-year period) are insufficient to close a substantial price gap of new BEVs and ICEVs.”

¹⁶ RACE for 2030 Report, Business Fleets and EVs: Taxation changes to support home charging from the grid, and affordability, 1-164:97