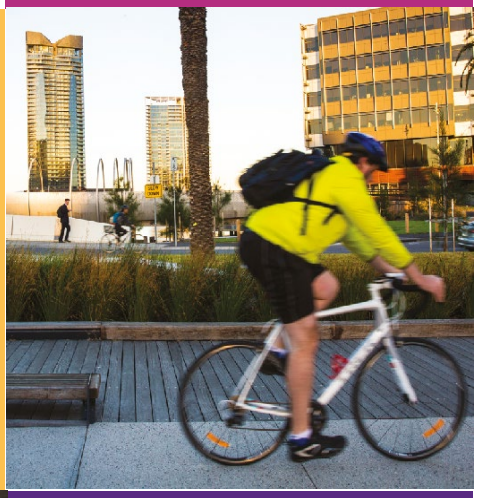
COUNCIL OF CAPITAL CITY LORD MAYORS

SUBMISSION TO THE FUTURE FUEL STRATEGY DISCUSSION PAPER

9 APRIL 2021



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Introduction

The Council of Capital City Lord Mayors (CCCLM) appreciates the opportunity to provide a submission on the Future Fuel Strategy discussion paper.

The CCCLM consists of the Lord Mayors of Adelaide, Brisbane, Darwin, Hobart, Melbourne, Perth and Sydney, and the Chief Minister of the ACT.

Australia's capital cities account for 70 per cent of the GDP and are the place of employment for more than 9 million Australians, and 2.3 million Australian businesses. As one of the worlds' most urbanised nations, Australia's capital cities are instrumental to the implementation of climate, transport and energy reform.

The CCCLM released a Statement in 2019 calling for stronger climate action in Australia. The CCCLM called on the Australian Government to:

- Raise the level of action and ambition on climate policy in Australia through assessing a new national emissions reduction target which is better aligned with the United Nations ambition to limit global warming to 1.5 degrees Celsius;
- Work with Australian Mayors and local governments to deliver stronger emissions reductions through establishing a new national agreement for city climate action; and
- Strongly support local governments to better prepare their cities and communities for climate extremes.

The CCCLM believes that Australia should undertake assessments of far deeper national emissions reductions. Our level of government stands by to act as a major partner in responding to the climate challenge.

Most recently as part of the CCCLM pre-budget submission for FY2021-22, CCCLM recommended that the Australian Government focus on the following transport specific opportunities:

- Facilitate opportunities that reduce emissions in cities, including electrification of transport and incentives for take up of active travel. For example, tax incentives could be applied leading to increased participation in active travel and take up of electric vehicles.
- Create a program that provides incentives for the delivery of fully electric public transport systems and electric vehicle charging infrastructure.

Stronger action on addressing transport related emissions is essential. Growth in the Australian road transport task has led to a corresponding increase in number of vehicles consuming fuel, which in turn, has led to an increase in greenhouse gas emissions from the sector. In 2018, light passenger and commercial vehicles produced over 63Mt $CO_{2\text{-}e}$[1], which accounted for 63 per cent of emissions from the transport sector and over 11% of all greenhouse gas emissions produced in Australia[2]. Together, we call on the Australian Government to collaborate and facilitate opportunities that contribute towards emissions reductions in cities, including electrification of transport, removal of barriers and provision of incentives for the take-up electric vehicles.

[1] UNFCCC Inventory (climatechange.gov.au)
[2] Vehicle emissions | Green Vehicle Guide

Submission

The CCCLM supports the three principles outlined by the Australian Government's Future Fuels Strategy:

- Addressing barriers to the rollout of new vehicle technologies will increase consumer choice
- Government investment in early-stage technologies can stimulate market and private sector investment
- Access to information can help people make informed choices.

CCCLM supports the five priority Future Fuels Strategy initiatives, and in addition to these priorities, recommends additional priority areas to incentivise the uptake of Zero Emissions Vehicles at-scale, including:

- Zero and Battery Electric Vehicle Emissions (BEV) incentivisation
- Increasing fuel efficiency standards (CO_2 per kilometre) and zero emissions vehicle targets.

Also, while not detailed in this submission, additional factors in transport energy use and efficiency require further consideration and include:

- Reducing travel (telecommuting and planning to enable more living near work, thereby reducing emissions from trips not taken)
- Public transport (provision of accessible, reliable and timely local services)
- Active transport (provision of safe and accessible infrastructure that supports active travel)
- Rail and sea freight with intermodal hubs (leading to reduction of inter-city emissions)
- Traffic congestion, noise and air quality (and associated healthcare costs)
- Road maintenance
- Driver education.

The CCCLM strongly recommends tax incentives for non-luxury electric vehicles, such as the removal GST or tax credits equivalent to GST until predetermined uptake (e.g., 27% of new sales), setting targets for zero emissions vehicles, and increased fuel efficiency standards.

Table 1 below provides the CCCLM response to the Australian Government’s Future Fuels Strategy discussion paper.

Table 1 - Response to five existing and new priorities areas for the Future Fuels Strategy initiatives

Priority Areas and Actions	**CCCLM Comment and Recommendations**
1. Electric vehicle charging and hydrogen refuelling infrastructure where it is needed	
1.1 Address battery electric vehicle 'charging blackspots' through the Future Fuels Fund	CCCLM agrees with action 1.1. to provide more public chargers across metropolitan, regional and rural Australia to fill 'charging blackspots' to install battery electric vehicle charging stations powered by renewable energy along Australia's national highways. The private realm is generally a 'black spot', and there is a need to facilitate electric vehicle charging in the private realm, particularly in multi-unit residential and commercial buildings, and in urban renewal precincts. There are also significant differences and challenges between existing residential apartments and how to retrofit them for BEV and new build which local government can cover through their planning standards and development incentives. Motorists expect convenient access to recharging facilities for their vehicles, and access to infrastructure is expected to build consumer and business confidence in investing in zero emissions vehicles (ZEV). Recent budget announcements from the ACT Government include the commencement of work to inform a ZEV Public Charging Masterplan for the rollout of charging infrastructure, including 50 publicly accessible electric vehicle (EV) charging stations in 2021-22, as well as undertaking market sounding to attract a more robust ZEV ecosystem in the ACT and adopting a target for new ACT vehicle sales to be zero emission by 2030. CCCLM recommends that 'blackspot locations' are identified according to cross-spatial user-types (central business districts and suburban areas, including under-served areas such as high density living, older apartments, as well as business fleet, freight and delivery, tourism, public transport and taxi and shared transit, etc.). CCCLM also recommends that the Australian Gov enable EV ready buildings through the National Construction Code 2025 update (EV ready means: building electrical transformers sized for future EV demand, conduits available to run in cabling in the future, separate metering, etc to car park areas).
1.2 Support businesses with charging infrastructure costs to enable fleet uptake	CCCLM agrees with action 1.2 to support 'back to base' private fleet charging infrastructure, support businesses with commercial fleets to undertake charging installation projects, including electrical upgrades, such as for three-phase power. CCCLM recommends that vehicle to grid, vehicle to home, vehicle to building and many other local energy use or wider system services be encouraged and integrated as part of fleet infrastructure installations.
1.3 Demonstrate hydrogen fuel cell electric vehicle refuelling in more locations	CCCLM agrees with action 1.3 to co-invest in demonstration hydrogen refuelling stations. CCCLM recommends that a public transport agency be actively encouraged to apply for ARENA funding to explore and/or trial an urban demonstration hydrogen refuelling station and vehicle (e.g., bus).

Priority Areas and Actions	CCCLM Comment and Recommendations
1.4 Investigate future deployment opportunities for charging and refuelling infrastructure	CCCLM agrees with action 1.4 to investigate scaled deployment of electric and hydrogen refuelling stations. CCCLM recommends the ideal public charging levels to support EV uptake be understood (the scale of when and where battery electric vehicle fleet market penetration is most likely to develop), as well as connecting public EV charging infrastructure to source its electricity from renewable sources where possible. CCCLM also recommends the investigation of EV/hydrogen charging infrastructure on major routes between capital cities, especially for large freight vehicles.
1.5 Collaborate with states and territories to maximise impact	CCCLM agrees with action 1.5 to collaborate with states and territories to establish bilateral agreements to leverage government infrastructure investment in fleet projects CCCLM recommends that local government is also engaged to rollout national road signage standards, charging infrastructure installation guidance, and interoperable data and payments standards. CCCLM also recommends that States and territories are encouraged to share postcode level electric vehicles to internal combustion engine registrations data with Local Government Areas to make transparent the growth of electric vehicles registered to give an evidence base to support provision of charging infrastructure requirements now and in future
	Charging and refuelling infrastructure - Questions 1. What are the highest priority charging and refuelling blackspots that should be considered under the ARENA administered Future Fuels Fund? In the urban context, CCCLM recommends that high-density living, commercial urban delivery, public transport and taxis be considered for blackspots. 2. What technical issues remain for rolling out recharging and refuelling in both metropolitan and regional blackspots? CCCLM recommends that older apartment buildings be considered as blackspots. 3. What are the biggest commercial barriers to installing new charging or refuelling infrastructure? The biggest barriers for local government are project management and technical expertise to understand requirements, develop and design adaptable charging infrastructure, as well as securing funding for electrical and building upgrades. 4. What barriers are there to co-locating charging with existing infrastructure (for example carparks or service stations) compared to standalone charging stations? Councils face the double cost of installing and having to ensure the carparks are used correctly by parking wardens. 5. What information do businesses need to ensure an integrated charging network can be delivered across Australia? Organisations require assurance that a charging network will not only be available, but available at the scale to charge vehicles according to operational requirements in relation to the uptake of EV usage.
2. Early focus on commercial fleets	

Priority Areas and Actions	CCCLM Comment and Recommendations
2.1 Support businesses to incorporate new vehicle technology into their fleets through the Future Fuels Fund	CCCLM agrees with action 2.1 to support 'investment grade' information and lessons from these trials will be shared so other businesses can use it to inform their own investment decisions. CCCLM recommends that support be available to local government fleet and support services (e.g., waste trucks, heavy utility vehicles), which will also enable additional promotional and educational opportunities of hydrogen and electric vehicle in the community at large.
2.2 Support road freight businesses to trial the latest technology and improve fleet productivity through the Freight Energy Productivity Program	CCCLM agrees with action 2.2 to support heavy road freight businesses to assess and evaluate the benefits of new technologies. CCCLM recommends that scale of implementation for heavy road freight be a sectoral "transition" rather than "trial". CCCLM supports hydrogen infrastructure for heavy fleet but setting minimum efficiency standards for heavy fleet will have a more immediate impact as many heavy vehicles entering the Australian fleet use more fuel.[3]
	Early focus on commercial fleets – Questions 1. What are the main barriers to adding new vehicle technology into light and heavy-duty vehicle fleets? The main barriers facing local government is towards adoption of zero emissions heavy vehicles is the lack of access to models and the economic feasibility of purchasing those that are available. 2. How could the Future Fuels Fund help address these barriers? In addition to subsidies, increasing CO2 levy on high GHG emitting vehicles would further encourage transition to lower GHG emissions technology. 3. In what ways (other than direct funding) could the Government assist businesses to increase uptake of new vehicle technologies in their fleets? Commercial fleets provide an effective pathway for early adoption and the creation of a second-hand ZEV market. The ACT Government has announced it will establish a fleet advisory service to support Canberra businesses and community organisations transitioning their fleets to ZEVs. In April 2018, the ACT Government released the Zero Emissions Vehicles Action Plan 2018–21 to accelerate the transition to battery electric and fuel cell vehicles, including shifting to a zero emissions Government passenger vehicle fleet from 2020.
3. Improving information for motorists and fleets	

[3] Heavy Vehicle Emission Standards for Cleaner Air, Australian Government

Priority Areas and Actions	CCCLM Comment and Recommendations
3.1 Improve information for motorists on new vehicle technologies on the Green Vehicle Guide website	CCCLM agrees with action 3.1 to expand and redevelop the Green Vehicle Guide website. To further improve comparative methodology of internal combustion versus electric and hydrogen vehicles, consideration should also be given to inclusions and exclusions in the National Greenhouse Accounts Factors lifecycle assessment of Scope 3 emissions from liquid fuel production, including international crude oil transport and energy used for extraction and refining. This would ensure all energy use and emissions from extraction, transport and refinement of liquid fuels is accurately reflected in final (well-to-wheel vs full fuel electricity-to-wheel) modelling. To support the effective regulation and incentivisation of electric vehicles, the Australian Road Rules [4](Road Rules) and related legislation could be further updated to include a separate and nationally consistent definition for plug-in hybrid electric vehicles (PHEV) and battery electric vehicles (BEV). Differentiation of these vehicles from conventional hybrid electric (HEV) and FCEVs would enable tailoring of incentives to the specific needs of different vehicle types. An example of where this is currently problematic for local government is in the administration of dedicated on-street electric vehicle parking bays. As neither the Road Rules, nor the LVSR separately define electric vehicles, it could be interpreted that eligible vehicles may also include HEVs or FCEVs, which do not require charging infrastructure. Consequently, the lack of a clear definition could adversely impact on charging station availability, impairing the effectiveness of incentive programs and returns for public and private investors. Division 5 or 6 of the Road Rules could be amended to include electric vehicle parking bay as a stopping zone for PHEV and EVs. The following example definitions are provided for illustrative purposes; 1. Plug-in Hybrid Electric Vehicle (PHEV) means a vehicle, with an on-board energy storage system that can be charged from an external electricity supply, that is powered by 1 or more electric motors or traction motors that are used in conjunction with another propulsion system for the vehicle. 2. Battery Electric Vehicle (BEV) Plug-in electric-powered vehicle means a vehicle, with an energy storage system that can be charged from an external electricity supply, that is powered by one or more electric motors or traction motors that are the only propulsion system for the vehicle. The Green Vehicle Guide Australian's methodology and Road Rules and related legislation could be updated to provide consistent comparisons and definitions for well-to-wheel emissions and the four different types of electric vehicles to support effective regulation and targeted incentives programs.
3.2 Share knowledge gained from commercial fleet trials funded through the Future Fuels Fund	CCCLM agrees with action 3.2 to publish data and communicate credible real-world information on performance and costs.

[4] Australian Road Rules

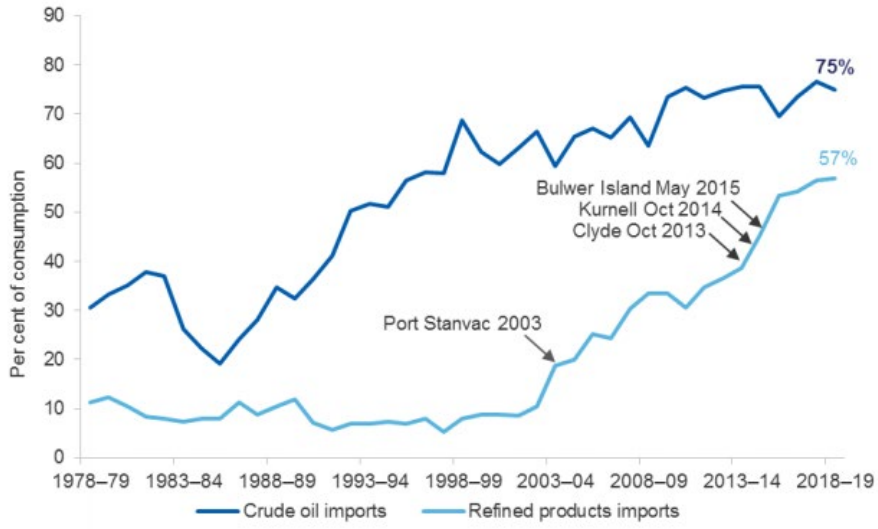
Priority Areas and Actions	CCCLM Comment and Recommendations
3.3 Investigate what guidance is needed for businesses on the taxation of electric vehicles	CCCLM agrees with action 3.3 to investigate and issue updated guidance on the tax treatment. A review of international programs indicates that tax reform is an effective mechanism to encourage purchase of electric vehicles. Consideration could be given to the following areas of taxation: 1. Temporary relief for GST for zero-emission vehicles. 2. Reform of novated lease expense allowances to remove perverse incentives for vehicles to be driven additional kilometres each year. 3. Phase out liquid fuel deductions. 4. Federal to State grants to support temporary relief for state-level stamp duty (point of sale) and registration discounts for electric vehicles. 5. Temporary relief from Fringe Benefits Tax and Luxury Car Tax laws to adjust for higher capital cost of electric cars. CCCLM recommends that the Australian Tax Office (ATO) should look to favourably assess electric vehicle expenses, including up-front capital costs to purchase EVs (e.g., reduce tax obligation) relative to internal combustion vehicle expenses. A package of temporary tax incentives and reforms could be introduced to accelerate the transition to electric vehicles, with focus on GST (see priority 6 below).
3.4 Assist the road freight sector with access to experts to support decisions on fleet investment through the Freight Energy Productivity Program	CCCLM agrees with action 3.4 to provide grant funding to develop 'investment grade' information for heavy freight businesses.
	Improving information for motorists and fleets - Questions 1. What is the most important information to provide to motorists and fleets about new vehicle technologies and future fuels? The most important information is a longer-term roadmap that outlines projected uptake, government interventions (subsidies) to assist businesses and individuals to transition to BEVs and ZEVs. As the Future Fuels Strategy will be an important element of the Government's technology-based Long-Term Emissions Reduction Strategy, which will be released before the 2021 United Nations Climate Change Conference known as COP26, incentives should be included in this Strategy.

Priority Areas and Actions	CCCLM Comment and Recommendations
	2. What are the highest priority knowledge sharing areas to be targeted in future fleet trials? The highest priority areas for future fleet trials are how to best integrate V2G at scale with fleets, including all required standards, communications, and related requirements. 3. What additional guidance do businesses need on technical or taxation matters in relation to new vehicle purchases? No additional comment.
4. Integrating battery electric vehicles into the electricity grid	
4.1 Research consumer charging behaviour and mechanisms to encourage charging outside of peak electricity demand periods	CCCLM **strongly** agrees with action 4.1 to undertake a study to better understand likely consumer behaviour and include mechanisms to encourage motorists to charge at periods of low demand. CCCLM recommends that while related (high renewable electricity generation and lower wholesale prices), that equal emphasis be given to renewable generation as in behaviour change in relation to electricity prices in consumer studies and analysis. For example, almost half (45%) of respondents in the State of EVs 2020 report say they would charge their electric vehicle using renewable energy – either via rooftop solar panels and household battery (31%) or via an electricity contract which utilises green power (14%).[5]
4.2 Collaborate with energy experts and the electric vehicle industry to plan for the integration of large numbers of battery electric vehicles	CCCLM **strongly** agrees with action 4.2 to consider the large-scale charging demand of battery electric vehicles in the electricity grid and to improve data availability, **investigate grid integration standards for battery electric vehicles, and explore new tariff designs that encourage efficient network usage**.
4.3 Trial emerging charging technologies through the Future Fuels Fund	CCCLM **strongly** agrees with action 4.3 to co-invest in projects that help demonstrate emerging charging technologies, especially Bidirectional charging, including vehicle-to-grid and vehicle-to-home/business applications, to demonstrate the potential for battery electric vehicles to serve as distributed energy storage. ZEVs present an opportunity to provide support to the ACT's electricity grid. Canberra is set to be home to one of the largest EV vehicle-to-grid (V2G) trials in the world. The Realising Electric Vehicle-to-Grid Services (REVS) project will see 51 Nissan LEAF EVs deployed across the ACT to test and provide V2G services. The EVs will be part of the ACT Government fleet and when plugged in will provide Frequency Control Ancillary Services (FCAS) to the National Electricity Market (NEM).
	Integrating battery electric vehicles into the grid - Questions

[5] EVC-State-of-EVs-2020-report.pdf (electricvehiclecouncil.com.au)

Priority Areas and Actions	CCCLM Comment and Recommendations
	1. What are the highest priority issues to consider when integrating large numbers of battery electric vehicles into the electricity grid? A fair distribution of infrastructure-related costs among users must be considered. 2. What further action is needed to ensure consumers and the electricity grid can benefit from bidirectional charging technology? Understanding the behaviours of users (willingness to engage) in bidirectional public charging, required financial incentives and consideration to encourage maximum participation. 3. What are the opportunities for tariff innovation or reform to support the rollout of public charging infrastructure? Where possible, new public charging should integrate with renewable electricity generation. 4. How could motorists be incentivised to charge their battery electric vehicles outside periods of high electricity demand to help keep prices low? Price signals and choice in retail products that offer consumers a choice would a useful tool. Smart demand response technology will also enable new services and products (e.g., vehicle to grid). Incentivising charging to occur in low or minimum demand periods could help reduce or delay costly network investments, benefitting all energy users by avoiding network upgrade costs.
5. Supporting Australian innovation and manufacturing	
5.1 Support next generation technologies through ARENA	CCCLM **strongly** agrees with action 5.1 to support the Technology Investment Roadmap to accelerate the development of low emissions technologies. Additional consideration could be given to industry support, including from the Clean Energy Finance Corporation to secure long-term battery supply chain activities and enable industry transitions to high skill, technology development for electric and autonomous vehicles.
5.2 Support Australian manufacturing and innovation through the Modern Manufacturing Strategy	CCCLM supports the development of domestic networks and capabilities through a whole-of-innovation chain approach, such as the design and production technologies to move further up the critical minerals value chain. A failure by Australia to embrace a rapid adoption model for electric vehicles could impair local product and service innovation. Without a rapidly growing domestic market for the development and testing of unique electric vehicle services or products, Australia could lose a generation of automotive sector entrepreneurs to rapid emerging international markets.
	Supporting Australian innovation and manufacturing - Question 1. What are Australia's market niches in future fuels to maximise high-value domestic and export outcomes? High-value domestic and export Australian market niches include clean energy sector, by capturing greater value from IP, critical minerals deposits, renewable energy generation, mining and hydrogen resources.

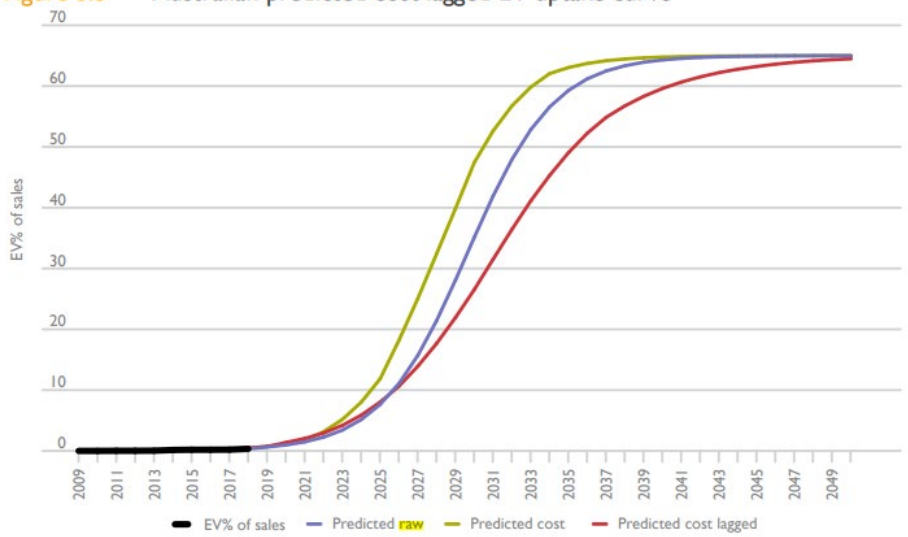
Priority Areas and Actions	CCCLM Comment and Recommendations
	Remanufacturing can also address waste and offers new opportunities with the increasing demand for sustainably produced goods.
Recommended additional priority: **6. Electric passenger vehicle (EV) incentivisation and associated funding**	
Considering the revenue implications of supporting the rapid transition to zero emissions vehicles	Federal taxes like the Luxury Car Tax (LCT), Fuel Excise, Fringe Benefits Tax (FBT) and Goods and Services Tax (GST); state charges like Stamp Duty, Registration and local fees including parking permits and charges add to vehicle ownership costs. The largest contributor to road-related revenue is the Australian Government's fuel excise. After allowing for estimated Fuel Tax Credits, the net gain to the underlying cash balance from the fuel tax system is expected to be $11.4 billion in 2020-21. CCCLM recognises that this revenue could be generated over time from other sectors and technologies, but it is a generally accepted principle that road users should pay for the benefits of using the road network. A nationally coordinated and consistent approach for short-term exemptions from some or all these taxes, duties and fees will accelerate the uptake of electric vehicles as prices fall. The Department of the Environment and Energy's Australian Energy Update 2020 demonstrates that oil refinery closures and declining domestic oil production, have made Australia increasingly reliant upon imported crude oil and refined petroleum product imports, as shown below.

Priority Areas and Actions	CCCLM Comment and Recommendations
	Figure 4.5: Share of imports in total consumption of crude and refined products  Source: Department of Industry, Science, Energy and Resources (2020) *Australian Energy Statistics*, Tables D and J Given Australia's reliance upon imported oil and refined products and elongated supply chain logistics, a rapid transition to electric vehicles should be prioritised to address Australia's lack of strategic fuel reserves and mitigate community vulnerability to transport fuel supply disruption, Australia has more to gain than most countries from the electrification of road transport. There is also a role for State and territory governments to play in addition to Australian Government policy. Recognising the importance of transport emissions, the ACT has implemented Australia's most generous financial incentives for the purchase and registration of ZEVs. To support the growth of the ACT's ZEV industry, the ACT Government is providing exemptions to stamp duty for new ZEVs. Newly purchased ZEVs – new and used, including grey imports – registered from May 2021 to June 2024 will be eligible to have the registration fee waived for the first two years of registration. Government has also committed to providing households with interest free loans of up to $15,000 to assist in the upfront costs of investing in ZEVs – including second-hand ZEVs – and home ZEV charging infrastructure. The Australian Government could assist through temporary pause on GST for electric vehicles, distribution of grants and/or incentives to reduce the barriers of uptake for early EV adopters who are already paying a premium via stamp duty and vehicle costs.

Priority Areas and Actions	CCCLM Comment and Recommendations
	The period for implementing incentivisation (or GST removal) could for example start in the 2021-22 budget and decrease upon price parity of EVs and ICE vehicles (1.1 ratio equivalent to GST savings est. 2027-28) and/or as electric vehicles become widespread (e.g., when electric vehicles cross a target of total new sales).

Table 3.3 EV/FFV cost ratio calculations for Australia

	Evs	Evs	Evs	Evs	Evs	FFVs	FFVs	FFVs	FFVs	FFVs	EV/FFV
	EV price	Principal	Interest	Annual subs	Annual cost	FFV price	Principal	Interest	Fuel	Annual cost	Cost ratio
2012	35736	7147	4646	0	11793	25008	5002	3251	1643	9895	1.19
2013	38857	7771	5051	0	12823	27077	5414	3519	1616	10550	1.22
2014	44360	8872	5767	0	14639	28910	5782	3758	1549	11089	1.32
2015	47613	9523	6190	0	15712	34817	6963	4526	1306	12796	1.23
2016	47801	9560	6214	0	15774	34961	6992	4545	1132	12669	1.25
2017	46275	9255	6016	0	15271	33791	6758	4393	1228	12378	1.23
2018	48868	9774	6353	0	16127	35087	7017	4561	1339	12918	1.25
2019	49754	9951	6468	0	16419	35087	7017	4561	1303	12881	1.27
2020	49469	9894	6431	0	16325	35087	7017	4561	1292	12870	1.27
2021	48280	9656	6276	0	15933	35087	7017	4561	1339	12917	1.23
2022	48945	9789	6363	0	16152	35087	7017	4561	1369	12948	1.25
2023	48517	9703	6307	0	16010	35087	7017	4561	1376	12954	1.24
2024	46860	9372	6092	0	15464	35087	7017	4561	1367	12946	1.19
2025	45438	9088	5907	0	14994	35087	7017	4561	1381	12960	1.16
2026	44628	8926	5802	0	14727	35087	7017	4561	1415	12993	1.13
2027	43817	8763	5696	0	14460	35087	7017	4561	1425	13003	1.11
2028	42906	8581	5578	0	14159	35087	7017	4561	1426	13004	1.09
2029	42096	8419	5472	0	13892	35087	7017	4561	1432	13010	1.07
2030	41184	8237	5354	0	13591	35087	7017	4561	1433	13012	1.04

Priority Areas and Actions	CCCLM Comment and **Recommendations**
	Figure 3.5 Australian predicted cost lagged EV uptake curve  The resulting Australian uptake forecast has EVs as 8 per cent of sales in 2025 and 27 per cent in 2030. [6] For the sake of scale, at the potential height of the GST exclusion for non-luxury electric vehicles, using a forecast[7] of 1,209,000 new vehicles sold and an estimated cost of $36,830 (AUD) for a battery electric vehicle (BEV) in 2027, and 26.86% of new sales being BEV in a low-cost scenario, a forgone GST would be in the order of ~$1.196B (AUD) or less than 0.25% of current federal receipts. At the November 2019 Infrastructure and Transport Ministers Meeting, ministers committed to consider the revenue implications of new technology vehicles. The Australian Government should continue to work collaboratively with jurisdictions on this matter.

[6] Electric Vehicle Uptake: Modelling a Global Phenomenon (bitre.gov.au)

[7] https://www.statista.com/statistics/616480/australia-vehicle-sales-volume/

Priority Areas and Actions	CCCLM Comment and Recommendations
	Finally, while the high cost of abatement for electric vehicles will decline as the upfront price of battery electric vehicles reduces, the Government's stance that "subsidies for battery electric vehicles at this high cost would not represent value-for-money for taxpayers compared to the Emissions Reduction Fund price of $16 per tonne" does not take into account higher and volatile carbon pricing over time, international trade pressures, not to mention major co-benefits of electrification including reduced air pollution on healthcare costs, the creation of new jobs in mining, technology and infrastructure, reduced transport costs, and increased fuel security. CCCLM strongly recommends that the Government should provide phased incentivisation (via direct subsidy, removal of GST or tax incentive) for electric vehicles until they cross predetermined percentages of total sales. The time for implementing should start in the 2021-22 budget and decrease upon price parity of EVs and ICE vehicles (at 1.1 cost ratio, equivalent post-GST savings) and/or when electric vehicles cross a target of 27% of total new sales.
Recommended additional priority: **7. Increasing fuel efficiency standards (CO_2 per kilometre)**	
Implement national regulations for vehicle emissions and efficiency standards	Despite Australia's national commitment to the Paris Climate Agreement, Australia is the only OECD country without fuel efficiency standards. In 2017, the average combined CO_2 emissions for a new light vehicle sold in Australia was 182 grams per kilometre (g/km). The National Transport Commission estimates that if Australian consumers purchased vehicles with best-in-class emissions, national average CO_2 emissions for new light vehicles would be over 50 per cent lower. On a grams-of-CO_2 per kilometre basis, official figures [i] reveal that Australian vehicles emit about 50% more than Japanese equivalents, for the EU, it is 45% and the USA puts out 20% less CO_2 than Australian vehicles. Adoption of vehicle efficiency standards will: 1. reduce GHG emissions, improve air quality, liveability and public health in Australian communities. 2. increase industry certainty about performance requirements in the Australian market, removing the disadvantage for manufacturers importing low and zero emission vehicles. In turn, this could increase consumer choice and quality. 3. influence community perceptions and support demand for manufacturers to import vehicles that offer low or zero emission options, including electric vehicles. 4. prevent manufacturers disposing of stock in Australia that they can no longer sell in other markets where standards prevail. 5. encourage manufacturers to bring forward new model release dates to the Australian market.

Priority Areas and Actions	CCCLM Comment and **Recommendations**
	New vehicles in the ACT are subject to the Vehicle Emission Reduction Scheme – an environmental initiative of the ACT Government aimed at reducing carbon dioxide (CO_2) emissions emitted by the transport sector. It provides financial incentives on the motor vehicle duty paid for those people purchasing vehicles with lower operating emissions. The scheme uses the Australian Governments Green Vehicle Guide which sets out the CO_2 emissions for different vehicles. Increased fuel efficiency standards would also offer the Australian Government the opportunity to incentivise electric vehicles and other zero emissions vehicles without a direct cost to the Commonwealth (or to the states). CCCLM recommends that Australia immediately develop and implement emissions-reduction standards and policy regulations to increase fuel efficiency to reduce greenhouse gas (GHG) emissions from all new on-road vehicles.[8] CCCLM also recommends that goals and targets are set to underpin interrelated Federal policies and strategies, such as setting interim national EV sales target -

[i] Real-World CO_2 Emissions Performance of the Australian New Passenger Vehicle Fleet 2008-2018

[8] Regulations for Emissions from Vehicles and Engines