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**Department of Infrastructure, Transport,
Regional Development and Local Government**

Electric Vehicles – the Commonwealth Regulatory Environment & Consumer Information

Presentation to:

Electric Vehicles In Australia Seminar

Adelaide, 23 April 2010

By:

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Dept of Infrastructure, Transport, Regional Development and Local Government

EVs & The Commonwealth's Role

- New Vehicle Design Standards (the Australian Design Rules)
- New Vehicle Labelling Standards (ADR81/02)
- The Green Vehicle Guide Website



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ADRs for New EVs

- **EVs expected to comply with passenger car ADRs**
 - Crash performance, lighting, braking...
 - Mitsubishi i-MiEV certification indicates this should not be an issue
 - Transport Ministers not supportive of lightweight EVs (quadricycles) on safety grounds
- **UN recently revised Regulation (R100/01) governing electrical safety of EVs (including plug-in hybrids)**
 - UN also considering standards for crash safety performance
- **Full (pure) EVs out of scope for the emissions standard (ADR79/02)**
 - But plug-in hybrids are required to meet ADR79/02



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Labelling for EVs

- **ADR81/02 specifies requirements for fuel consumption labelling**
 - ECE Reg 101 adopted in ADR81/02 covers all light vehicles, including EVs and plug-in hybrids, *but*
 - Current ADR silent on labelling requirements for EVs and plug-ins
- **ADR81/02 test procedure dictates a modified label format**
 - Primary results from testing pure EVs are range (km) and energy consumption (Wh/km)
 - Test for plug-in hybrids also records CO₂ emissions and fuel consumption
 - Current label format is not adequate for these vehicles



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Proposed Revised Label for EVs

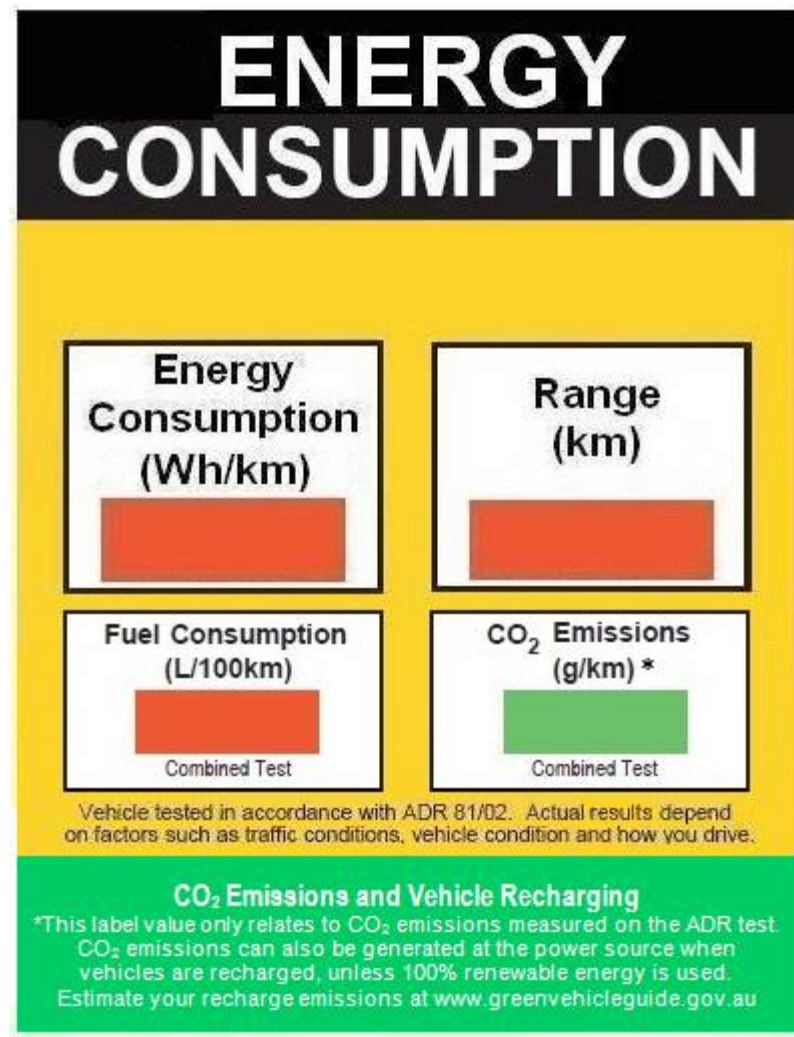
- In 2009-10, DITRD LG consulted on suitable format for EV label under ADR81/02
 - Most contentious issue around treatment of recharging emissions
- Dept's view is that label should:
 - Be recast as an "Energy Consumption" label
 - Reflect the data from testing under ADR81/02
 - Utilise a single format for all vehicles with external charge capacity
 - Alert consumers to the potential for CO₂ emissions from recharging, but not attempt to quantify those emissions on the label
 - instead refer consumer to the Green Vehicle Guide for more information



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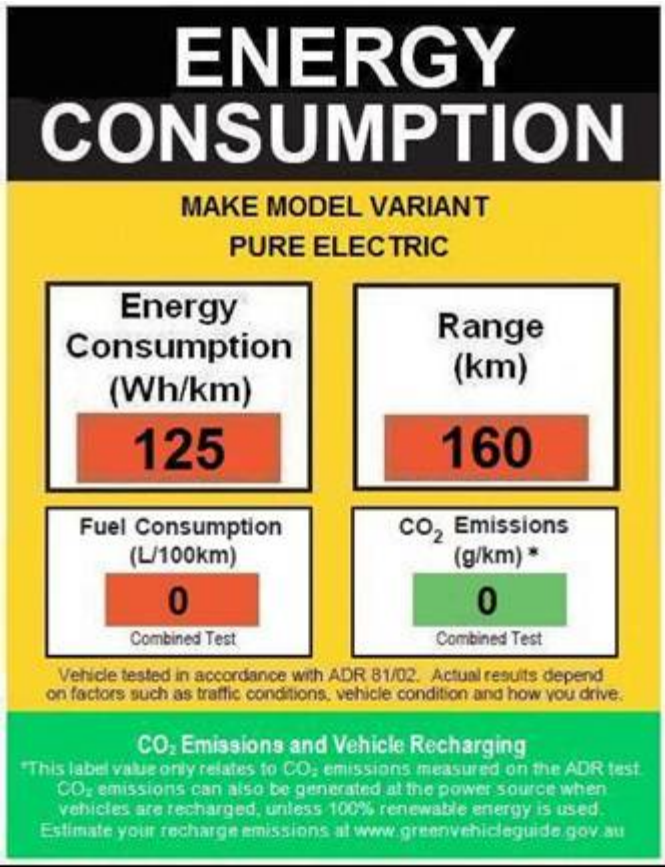
Draft EV Label Format under ADR81/02



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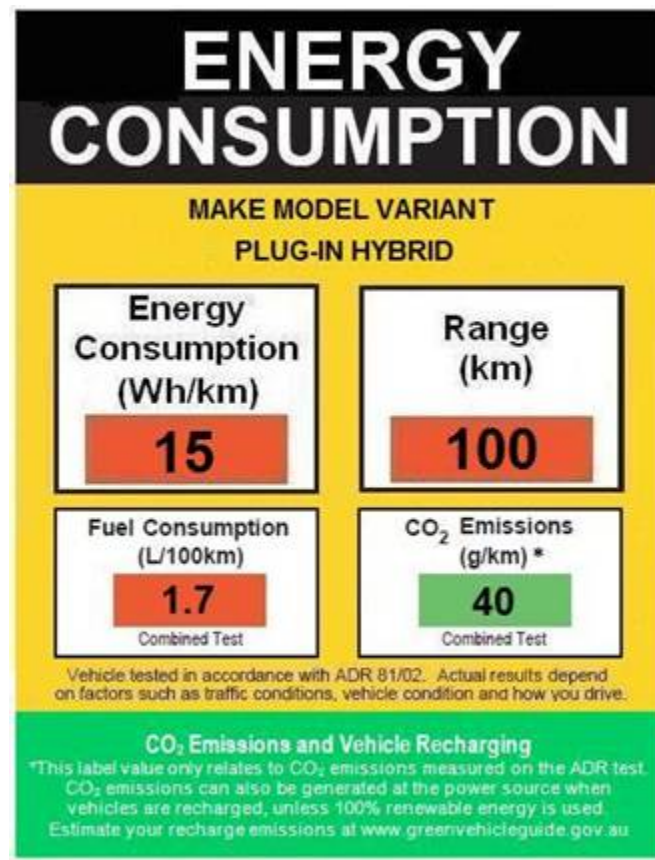
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Sample "Pure" EV Label under ADR81/02



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Sample Plug-in EV Label under ADR81/02



Proposed GVG Additions for EVs

- In 2009-10, DITRD LG also consulted on appropriate treatment of EVs under the Green Vehicle Guide (GVG)
 - Most contentious issue? ⇒ should recharging emissions be factored into the GVG's greenhouse ratings...
- **Dept's view is that in listing EVs, the GVG should:**
 - Provide the energy consumption, range, CO₂ and fuel consumption values from ADR81/02 (matching the label data)
 - Rate pure EVs as "zero emissions" vehicles for both Greenhouse and Air Pollution Ratings (i.e. score 10/10 on both ratings)
 - Rate plug-in hybrids on basis of CO₂ value from ADR81/02 for Greenhouse Rating, and on basis of standard to which vehicle is certified (ADR79/xx) for Air Pollution Rating
 - Provide consumers with additional information and calculation tools regarding recharging emissions and well to wheel emissions



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Possible GVG Results Page for Pure EVs & Plug-in Hybrids (cf. Hybrid & Conventional)

Overall Rating	Vehicle Details	Fuel Type	Fuel Consumption (l/100km)			CO ₂ Emissions (g/km) ¹	Greenhouse Rating ²	Air Pollution Rating	Energy Consumption (Wh/km)	Range (km)	Well to Wheel CO ₂ Emissions (g/km) ³
			Comb	Urban	Extra						
★★★★★	Pure EV	Elec	0	0	0	0			125	160	0-(your state)
★★★★★	Plug-in Hybrid	Elec/Petrol 95 RON	1.7	NA	NA	40			15	100	0-(your state)
★★★★★	Hybrid	Elec/Petrol 95 RON	3.9	3.9	3.7	89			NA	NA	(well to wheel emissions)
★★★★★	IC Petrol	Petrol 95 RON	4.8	5.7	4.3	113			NA	NA	(well to wheel emissions)



Next Steps on EVs – Commonwealth Government

- Prepare amendments to ADR81/02 & complementary amendments to GVG
 - ADR changes require formal endorsement by Minister Albanese
- **Monitor standards development process at UN ECE**
 - and consider case for adopting ECE Regs here if necessary
 - divergence internationally over electrical connectors (SAEJ1772 vs IEC 62196) for EVs - and appears UN ECE not looking at this aspect
 - needs further discussion to determine best approach for Australia
- **Continue to work with State and Territory transport and environment agencies working on EV issues**
 - under the committee framework of the Australian Transport Council
- **Monitor outcomes of EV activity from the *Smart Grid*, *Smart Cities* program**



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Useful Links

ADR81/02

<http://www.comlaw.gov.au/ComLaw/Legislation/LegislativeInstrumentCompilation1.nsf/all/search/2DCDADA9F9F0BBF4CA2574C6001498B2?OpenDocument>

UN ECE Reg 100/01:

<http://www.unece.org/trans/doc/2010/wp29/ECE-TRANS-WP29-2010-52e.pdf>

Green Vehicle Guide:

www.greenvehicleguide.gov.au

Smart Grid, Smart City:

<http://www.environment.gov.au/smartgrid/index.html>



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