

Energy Market Arrangements for Electric and Natural Gas Vehicles

A submission by the ACT Government Environment and Sustainable Development Directorate to the Australian Energy Market Commission on the Approaches Paper of September 2011

These comments have been prepared by the ACT Government Environment and Sustainable Development Directorate in response to the Australian Energy Market Commission Approach Paper *Energy Market Arrangements for Electric and Natural Gas Vehicles*, published 22 September 2011. It provides general background information only on the ACT Government's current policies in support of electric and natural gas vehicles.

Background to ACT Government low emission vehicle policies

One of the ACT Government's priorities is to provide an effective and efficient transport system that meets the needs of the community while reducing its environmental and social impacts.

The ACT Government has recognised the potential contribution of electric vehicles to reducing the Territories greenhouse gas emissions. The ACT has legislated emissions reduction targets: to reduce greenhouse gas emissions to zero net emissions by mid-2060 and interim targets of a 40% reduction on 1990 levels by 2020 and an 80% reduction on 1990 levels by 2040. Approximately 22% of the ACT's emissions come from transport fuels¹ and increased use of electric vehicles through replacement of internal combustion engine-vehicles will assist in meeting emissions reductions targets. When powered by renewable energy, electric vehicles can provide zero emissions transport.

The ACT Government is currently consulting with the community on a new *Transport for Canberra* policy. A draft Transport for Canberra policy has been developed following many forums, discussions and other consultation processes with the Canberra public and other stakeholders.² The recently released ACT Sustainable Energy Policy 2011–2020 canvasses a range of measures related to electric vehicles.³ The ACT Government monitors other jurisdictional trials through the Standing Council on Energy and Resources.

¹ Independent Competition and Regulatory Commission, ACT Greenhouse Gas Inventory Report for 2008-09, http://www.environment.act.gov.au/data/assets/pdf_file/0003/235578/ACT_Greenhouse_Gas_Inventory_Report_2009_20110930.pdf p5.

² Draft Transport for Canberra policy: <http://www.timetotalk.act.gov.au/time-to-talk/transport/>

³ ACT Sustainable Energy Policy 2011-2020: http://www.environment.act.gov.au/energy/energy_policy

Better Place Australia (an electric charge point provider) has entered into a commercial arrangement with ActewAGL Retail (the ACT's major energy retailer) that stipulates that electricity sold to customers using the Better Place charging network in Canberra is sourced from GreenPower. This arrangement does not apply to charge points in private homes or businesses.

The ACT Government has provided funding to and participates in an ACT Electric Vehicle Council to support the Canberra International Electric Vehicle Festival that enhances public awareness of electric vehicles.

Key ACT Government electric vehicle policies

The ACT Government has undertaken several activities supporting the uptake of electric vehicles.

- Under Measure 15 of the ACT Sustainable Energy Policy, the ACT Government commits to supporting the roll-out of electric vehicle support infrastructure through the provision of enabling assistance and will introduce electric vehicles into the ACT Government fleet in 2012-13.
- The ACT Government has not endorsed any specific electric vehicle provider and prefers that electric vehicle charging infrastructure should operate on an open access basis.
- Electric and gas powered vehicles receive a 20% discount on registration costs in the ACT resulting in a \$156.24 fee for a medium sized vehicle.⁴ As electric vehicles are expected to replace the purchase of conventional passenger vehicles, any additional concessions to encourage the take up of electric vehicles would result in less revenue for the ACT Government.

ACT electric vehicle technical and planning and environmental regulation

The ACT Government will continue to streamline processes for electric vehicle charging station approval processes and to clarify other planning or regulatory issues that might assist expansion of the ACT electric vehicle fleet.

Electric vehicles are a new industry being developed primarily by private sector interests and there is a role for Government to reduce barriers to this new industry (for example planning associated with charging infrastructure) and to ensure the safe introduction and on-road use of electric vehicles in the ACT.

Electric vehicle manufacturers such as Nissan, and specialised companies such as ChargePoint and Better Place Australia, indicate that they intend to sell electrical charging points to the owners of electric vehicles. The specifications of these points will need to meet uniform design rules. This issue is expected to be progressed through the Federal Chamber of Automotive Industries.

⁴ Green Vehicles Stamp Duty Scheme <http://www.rego.act.gov.au/registrations/regogreenvehschm.htm>

Initially, electric vehicles are expected to use single-phase 15 Amp, 240 Volt electricity plugs for charging. The ACT's planning guidelines for private electric vehicle infrastructure allow these plugs to be installed in residences and businesses by any licensed electrician. Revised regulations are being developed to provide that the installation of charging points is not subject to a development application, provided that certain simple placement rules are followed. These points will require careful assessment of public risks.

Electric vehicle batteries may create significant waste management challenges. There will be benefits obtained from governments and waste management authorities working with electric vehicle retailers and the Environment Protection and Heritage Council to support batteries being reused and ultimately recycled via a product stewardship arrangement.

Electric vehicle network impacts

Electric vehicles offer both significant risks and opportunities for electricity networks and the National Electricity Market as a whole. There is a concern that as electric vehicles become more popular, electricity network capacity might be strained by a high number of electric vehicles using the network at the same time, potentially at peak times. There are significant opportunity mitigate peak load impacts such as ensuring incentives exist for charging at off-peak times. The potential licensing of electric vehicle energy providers under National Energy Retail Law will also need clarification.

The ACT Government will closely monitor outcomes of comprehensive trials of electric vehicles currently underway in other jurisdictions including Victoria and Western Australia. The ACT has access to these trial results as part of inter-jurisdictional arrangements. The introduction of electric vehicles into the ACT will benefit from, and continue to be supported through, coordination across the ACT Government and participation in national coordination through COAG and its Ministerial councils.

ACT CNG bus fleet

The ACT Government's bus fleet operates 70 CNG vehicles. These were acquired 2004-06 and 2008. The 2008 acquisition of 16 buses was also a part-response to the ACT Government's 2007-25 climate change strategy *Weathering the Change*.

In the current fleet replacement program no more purchases of CNG buses are planned, largely because of their high capital and maintenance costs. Canberra's location at about 500m above sea level results in exhaust from a CNG bus having a similar impact to the exhaust from a Euro 5 diesel bus.