



**31 October 2011**

The Chairman  
Australian Energy Market Commission  
Level 16, 1 Margaret Street  
SYDNEY NSW 2000

By email to [submissions@aemc.gov.au](mailto:submissions@aemc.gov.au)

Dear Chairman,

### **Energy Market Arrangements for Electric and Natural Gas Vehicles**

AGL Energy welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC) *Approach Paper*.

As the leading investor in renewable energy and one of the largest energy retailers in Australia, AGL Energy (AGL) is well placed to comment on the *Approach Paper*. AGL operates across the supply chain and has investments in coal-fired, gas-fired, renewable and embedded electricity generation. AGL is Australia's largest private owner, operator and developer of renewable generation in Australia with 1,073 MW of renewable capacity (at 30 June 2010). AGL is also a significant retailer of energy with over 3 million electricity and gas customers.

The most recent *AGL Applied Economic and Policy Research Working Paper*, "Electric vehicles in the NEM: energy market and policy implications" is attached to this submission<sup>1</sup>. The paper articulates that when combined with appropriate policy settings (such as: the deregulation of electricity pricing; and the introduction of smart metering technology and appropriate time-of-use (TOU) electricity pricing structures) the adoption of electric vehicles has the potential to enhance three policy objectives:

- Reductions in transportation costs - Over time, the paper establishes that electric vehicles may become more cost effective than other conventional combustion engine technologies;
- Improvements in environmental and health outcomes – Electric vehicles have the potential to reduce "smog" and greenhouse gas emissions; and
- Reductions in unit pricing of electricity for all consumers – If accompanied by the introduction of ToU electricity pricing, electric vehicles could enhance the utilisation rate of existing capital infrastructure, thereby reducing unit pricing for all consumers (a positive production externality).

AGL notes that one of the issues that is critical to the successful adoption of electric vehicles is the responsiveness of electricity and gas demand to higher prices. AGL has completed a number of research projects on this topic. In particular, a working paper by

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<sup>1</sup> AGL Working Paper available at: <http://www.aglblog.com.au/2011/10/agl-working-paper-no-27/>

Simshauser and Downer<sup>2</sup> examined how the introduction of dynamic pricing would impact on electricity demand (particularly at peak times). The study demonstrated that an 8.2 percentage point improvement in the load curve could be achieved with the introduction of dynamic pricing. The paper's modelling showed that a flattening of the household load curve from 38.5% to 50%, indicated a reduction in unit costs of about \$32/MWh, and if applied unilaterally across the four primary NEM states, a reduction in costs of some \$1.6 billion pa in the household sector alone. The conclusions from this research are clear: the introduction of smart metering and dynamic pricing (with appropriate policies in place to ensure customers in hardship are not adversely affected) should be prioritised by energy policy makers. This is critical for ensuring that electric vehicles improve rather than worsen capital utilisation rates.

AGL congratulates the AEMC for establishing this review into electric vehicles. In summary, AGL believes that electric vehicles themselves do not require specific regulation. However, for the benefits of electric vehicles to be realised, two key issues require urgent attention by energy policy makers:

- the removal of retail price regulation and the introduction of price monitoring where competition is deemed to be effective; and
- the introduction of smart meters and dynamic pricing with appropriate safeguards for hardship customers.

Should you have any questions in relation to this submission, please contact me at [tanelson@agl.com.au](mailto:tanelson@agl.com.au) or on (02) 9921 2516.

Yours sincerely,



Tim Nelson  
Head of Economic Policy and Sustainability

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<sup>2</sup> AGL Working paper available at: <http://www.aglblog.com.au/wp-content/uploads/2011/03/No.24-Limited-Form-Dynamic-Pricing.pdf>