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Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Sir

ISSUES PAPER: ENERGY MARKET ARRANGEMENTS FOR ELECTRIC AND NATURAL GAS VEHICLES

Thank you for the opportunity to provide input to the Issues Paper, *Energy market arrangements for electric and natural gas vehicles*, released on 18 January 2012.

Aurora Energy Pty Ltd, ABN 85 082 464 622 (Aurora) is an incorporated, State Government owned fully integrated energy and network business, with complementary activities in telecommunications and energy-related technologies. Aurora provides electricity generation, retail and distribution services to more than 270,000 customers in the Tasmanian jurisdiction. In this document, reference to Aurora should be taken as reference to Aurora in its capacity as the provider of distribution services licensed by the Regulator under the Electricity Supply Industry Act 1995.

Aurora is keenly aware of the effect of rising electricity prices on its customers. To this end, Aurora has implemented a business-wide strategy to ensure that it provides its services to its customers at the lowest sustainable price. Data presented in the Issues Paper indicate that electric vehicle adoption may create significant incremental demand upon electricity infrastructure, potentially necessitating significant investment. In line with its strategy, Aurora supports the search for a solution to electric vehicle charging in which costs are apportioned on a "causer pays" basis.

With regards to distribution services, Aurora considers that the pricing principles in clause 6.18.5 of the National Electricity Rules, in conjunction with appropriate classification of distribution services associated with the provision of charging for electric vehicles, will ensure that the causer pays principle is met.

Aurora notes that, from a distribution network planning point of view, the actual reason for the demand at a connection point is immaterial, only the characteristics of the demand are important. Introducing a requirement to differentiate between the end uses of various loads upon the network introduces an extra order of complexity into both network planning and tariff design.

In relation to tariffs, enforced off-peak charging of electric vehicles, whilst providing the least incremental impact on network peak demand, imposes restrictions on the use of electric vehicles, limiting significantly their daily range. In the event that the policy objective is to limit the use of electric vehicles to urban areas, off-peak charging is the ideal approach. Aurora considers that a form of time-of-use tariff is the most

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appropriate approach to electric vehicle charging. Time of use tariffs permit the customer to recharge their vehicle when they desire but also, when properly designed, provide a strong pricing signal.

From a distribution network point of view, given that distribution networks are built to serve peak demand, the preferred network tariff would be a "time-of-use specified demand" style tariff. In this type of tariff, the cost per unit of demand would vary with the time of usage. Additionally, the customer would nominate a threshold level of demand for a period. In the event that the customer's demand exceeded the specified threshold, the rate per unit of demand would be significantly higher than if the customer stayed within the demand threshold. Aurora notes that it raised the concept of time of use demand tariffs in the consultation leading to the development of its *Network Tariff Strategy Periods 2 to 5, 1 July 2008 – 30 June 2012.* No responses on this issue were received.

The metering issues associated with electric vehicles have the potential to be complex. Aurora observes that while additional metering to accommodate electric vehicle charging can be handled under existing regulatory arrangements, and be directly charged to the customer requiring the meter, the "back-office" system costs to support mobile NMIs may not be so easily apportioned.

Aurora commends the AEMC for choosing to address issues surrounding the introduction of a new technology at such an early stage of its development. Aurora observes, however, that the technology is immature and that the future requirements to support electric vehicles are essentially unknown. Further, the National Electricity Market is not yet settled with regard to the various roles that parties can take. Aurora considers that it would be imprudent to be overly prescriptive in defining a framework to address issues that are unlikely to arrive in the short-term. Rather, it may be more appropriate for the AEMC to maintain a watching brief on the development of the electric vehicle technology and associated industry effects, and to make rule changes through the existing processes to effect the necessary market structure alterations so that emerging issues may addressed when there is more detail available with which to design solutions.

If you have any questions, please address them to the contact noted above.

Yours faithfully

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