



**GE**

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Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

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**RE: EMO0022 Energy Market Arrangements for Electric and Natural Gas Vehicles**

General Electric (GE) welcomes the Ministerial Council on Energy's reference to the Australian Energy Market Commission (AEMC) to provide advice on "issues relating to the Australian energy markets which may arise from the potential increased uptake of electric and natural gas vehicles".

GE notes the Approach Paper "Energy Market Arrangements for Electric and Natural Gas Vehicles" released by the AEMC, its plan provide our Advice to the MCE by mid-2012, and for the draft and final Advice will coincide with the draft and final report for the Power of Choice review.

The deployment of electric vehicles (EVs) is a significant for a wide range of GE businesses, ranging from our finance and vehicle fleet business Custom Fleet, smart grid and digital energy technologies, EV charging stations and power generation.

In addition, GE has committed to buy 25,000 EVs by 2015 with 1000 of those in Australia.

GE has forged a global alliance with Better Place, which encompasses collaboration on technology and financing in key areas of:

- standards-based technology development;
- battery financing;
- joint fleet electrification programs; and
- consumer awareness.

GE would welcome the opportunity to provide further submissions to AMEC following the publication of the Directions Paper and Draft Advice, and be prepared to participate in other consultation mechanisms such as a References Panel.

GE believes the model approach for EVs by governments and regulatory bodies should focus on four key outcomes:

- reducing the upfront costs of vehicles;
- ensuring the practical and “smart” build out of EV support infrastructure;
- accelerating technology breakthroughs; and
- encouraging adoption of open and interoperable standards.

### **Reduce the upfront costs of vehicles**

GE believes clear and consistent tax incentives for the purchase of private and fleet vehicles would lower the initial purchase price of electric vehicles and increase mass adoption.

Once EVs are commercially competitive with traditional technologies, these incentives should be gradually phased out.

Governments can also play a leading role in developing industry scale by moving toward full electrification of publicly-owned fleets.

### **Ensure the practical and “smart” build out of EV support infrastructure**

A range of public and private charging infrastructure options must be in place to support the rollout of EVs.

Tax incentives can be used to address the upfront cost barriers of this infrastructure and its installation.

The creation of model building codes and streamlined permitting processes will also accelerate the mass adoption of EV support infrastructure.

Strengthening the electricity infrastructure with smart grid technology is also a key component of the large-scale commercialization of EVs. Smart grid technology, coupled with the appropriate utility rate structures, can alleviate potential stresses on the grid.

Specifically, requiring utilities to offer dynamic rates that reflect the lower marginal cost of generation during off-peak hours would encourage night charging of EVs.

### **Accelerate technology breakthroughs**

Funding for research, development and demonstration (RD&D) activities focused on batteries, second life battery applications, battery recycling, advanced vehicle design, charging infrastructure and smart grid connectivity would reduce technology costs, improve performance and advance EV adoption.

### **Encourage adoption of open and interoperable standards**

Harmonized technical standards can accelerate innovation and investment in emerging technologies, improve market access and create economies of scale for technology manufacturers.

If I can provide additional information or clarification, please contact me on (07) 3001 4339 or [kirby.anderson@ge.com](mailto:kirby.anderson@ge.com).

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