

# Electric vehicles in Australia



The Greens have a plan to jump start the electric car revolution in Australia. With Electric Vehicles we can maintain our mobility while responding to the challenge of climate change and ensuring our energy security. Electric Vehicles will mean cleaner air, less noise in our streets and make Australia a better place to live.

Electric vehicles use an electric motor to move the vehicle and are recharged with electricity. The energy is stored in batteries or in other alternative storage systems on board the vehicle.

Around the world electric vehicles (EV) are beginning to transform the way we move. Global investment in EVs is accelerating with major car companies beginning to roll out new cars and infrastructure to charge and support EVs being developed.

EVs, along with increased investment in public transport, are central to meeting the twin challenges of climate change and energy security.

In Australia transportation contributes 14 per cent of Australia's carbon pollution (79 Mt CO<sub>2</sub>). The main source of transport emissions is road transport, which accounts for approximately 12 per cent<sup>1</sup>. Currently approximately 70% of our liquid fuel is sourced overseas, this will grow as access to fuel sources in Australia continue to decline<sup>2</sup>.

Electrifying our transportation system, including electric vehicles, alongside a shift to clean energy will produce a massive reduction in our carbon pollution from transport. At the same time we will free Australia from the threat of energy dependence.

EVs also offer enormous benefits in reducing local air and noise pollution and the potential for storage of renewable energy in vehicle batteries through smart grids.

While affordability is an important factor in consumer take-up of EV, prices will fall through technological improvements, particularly in battery technology, and economies of scale as the market share expands.

Estimates for the potential current global market are small 1–2% over the next decade, but some forecasts predict an increase in EV market share of up to 30% by 2030.

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1 National Greenhouse Gas Inventory, Department of Climate Change, May 2010

2 Australian Bureau of Agricultural and Resource Economics (ABARE)

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However, this share will only be possible and could be far greater and occur faster with significant government policy to help drive the investment in EVs<sup>3</sup>.

## THE ELECTRIC CAR REVOLUTION

Around the world government's are putting in place policies and investments for EVs:

- German Chancellor Angela Merkyl announced in May a plan to have one million electric vehicles on the road by 2020. The government hopes the "National Platform for Electric Mobility" will give the country's all-important car industry a technological edge over foreign competitors in order to secure some 750,000 jobs<sup>4</sup>.
- The United States Department of Energy \$25 billion loan program to retool existing production lines to production of vehicles whose fuel efficiency is at least 25% lower than what is currently required. Recently, US Energy Secretary, Steven Chu announced an additional \$2 billion of funding for battery manufacturing as part of the economic stimulus program, one of the few areas within the budget to receive a significant boost<sup>5</sup>.
- In China, EVs were recently identified as a significant opportunity to offset the impact of the Global Financial Crisis including ambitious plans to increase annual production capacity to 500,000 vehicles (EVs or PHEVs) by 2011. China aims to be one of the leading producers of hybrids and EVs within the next 3 years<sup>6</sup>. This ambitious plan to become the world's leader in EV production is built on promoting the use of EVs in China. The Ministry of Science and Technology has targeted 10 Chinese cities for their new pilot project to promote EVs with an expected 10,000 vehicles participating<sup>7</sup>.
- The UK government has pledged £115 million in government money to support electric, hybrid and other more environmentally friendly car projects over a five-year period to help make Britain "the European capital for electric cars"<sup>8</sup>.

3 IHS – Global Insight: Battery Electric and Plug-in Hybrid Vehicles study.

4 <http://www.thelocal.de/money/20100503-26949.html>

5 Bradsher K., The New York Times, "China Vies to Be World's Leader in Electric Cars, April 2009

6 Bradsher K., The New York Times, "China Vies to Be World's Leader in Electric Cars, April 2009

7 <http://www.chinaembassy.org.il/eng/zt/ccam/t512027.htm>

8 <http://euobserver.com/882/26594>

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For example, grants of up to £5,000 will be made to consumers who purchase or lease electric or plug in hybrid cars under a new plan to encourage adoption.

- In London, the Mayor Boris Johnson has established the London Electric Vehicle Partnership to foster EV adoption and exempted EVs from the £8 congestion tax that applies when entering central London.
- In Israel, the Government has committed to a minimum of 50% difference between the tax on ICEVs and the tax on EVs until 2015 (currently at 72% vs 10%) as well as an increase in gasoline tax of approximately 100%<sup>9</sup>.
- In California “The “Driving Alternatives” vehicle rebate program has allocated \$1.8 million toward vehicle incentive grants for qualifying alternative fuel vehicles, including plug-in hybrids. Grants of up to \$5,000 are made to consumers who purchase or lease such vehicles<sup>10</sup>.
- In Washington State vehicles that have a U. S. Environmental Protection Agency estimated highway fuel economy of at least 40 miles per gallon are exempt from state sales and use tax.<sup>31</sup><sup>11</sup>
- In Japan Tax breaks for Hybrid Electric Cars are delivered through a waiver of the automobile weight tax<sup>12</sup>.

Australians are enthusiastic about the shift to electric vehicles, a recent survey found that 39 percent of car buyers are interested in purchasing an EV and nearly half of those surveyed (45 percent) said they did not plan to consider a petrol-only vehicle for their next car purchase<sup>13</sup>.

9 Better Place, Submission to the Energy White Paper Process, p 7.

10 McCarthy K. “State Incentives for Hybrid Vehicles”, Connecticut Legislative Council August 2008

11 McCarthy K. “State Incentives for Hybrid Vehicles”, Connecticut Legislative Council August 2008

12 Green Car Congress, “Japan to Provide Tax Breaks for Hybrid, Electric Cars”, 8 February 2009, <http://www.greencarcongress.com/2009/02/japan-to-provid.html>

13 Ipsos research findings, July 23 2009

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Despite this, the introduction of electric vehicles into the Australian market is painfully slow with only a few numbers of EVs introduced so far and only a small number planned for fleet deployment in the next two years<sup>14</sup>.

## GOVERNMENT FAILURE

So far Federal Labor and the Opposition as well as State governments, with the notable exception of the ACT<sup>15</sup>, have failed to show real leadership on electric vehicles.

Labor's Green Car Innovation Fund, with its focus on fuel efficiency of existing oil-based vehicle technology has aimed to maintain the status-quo rather than drive innovation and secure the future of the car industry in Australia<sup>16</sup>. Two hundred million dollars was cut from the Green Car Innovation Fund by Labor in the last Budget and the Coalition has said they would cut a further \$200 million.

The QLD Government has a discussion paper but no policy; the Victorian government has committed only \$5 million to trialling EVs; Western Australia is trialling just ten EVs and the NSW government has set a measly target of 1% of hybrids for its fleets comprising 100 or more vehicles.

So Australia's approach has been piecemeal and small. While there are minor commitments to trials and testing by some state governments, the Federal Government has done almost nothing to promote the transition to electric vehicles.

The Greens have a plan to change that.

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14 See for example <http://www.promo.com.au/mitsubishi/MIZ1043/media/Australian%20Press%20Release%20Masuko%20announcement.pdf>

15 The Territory Government has announced its support of a city-wide roll-out of an electric vehicle network by Better Place. The Government also announced the establishment of the ACT Electric Vehicle Council to promote electric vehicles as a viable transport alternative. See <http://www.canberratimes.com.au/news/local/news/general/electric-car-plan-act-set-to-plug-in/1577774.aspx>

16 One request for funding from the Fund for a small-scale EV project has been rejected see. The Motor Report, Bolwell Electric Car Project Denied Green Car Innovation Funding, 14 October 2009

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## THE GREENS PLAN

Without a more substantial and linked up commitment to EV's Australia will be left behind.

So the first step in driving the shift to electric vehicles is deciding as a nation that is where we want get to. The Greens would make the electrification of transportation a key framework for government policy development.

We have a vision for Australian transportation based on zero-carbon energy and sustainable mobility. Investments in public transport, high speed rail and electric vehicles can transform the way we move and transport goods in a clean economy.

As a first step towards fulfilling that vision we propose three new measures to jump-start the drive to electric vehicles in Australia.

1. Modify the eligible expenditure guidelines for the Green Car Innovation Fund to enable the support of electric vehicle development and electric vehicle infrastructure development;
2. Allocate \$75 million in assistance funding to the Green Car Innovation Fund for the roll out of electrical vehicle infrastructure in all capital cities, including Melbourne.
3. Immediately place on the COAG agenda a policy framework for EV including:
  - implementation of consumer incentives for electric vehicle ownership including, registration rebates or cash-backs, tax credits as well as significant targets for government fleets;
  - putting in place a regulatory environment that supports electric vehicles such as regulation of deployment and the setting of competition and policy standards;
  - maximising energy opportunities through appropriate regulation, such as requiring "smart" charging sourced through renewable energy;
  - industry policy that develops the electric vehicle sector in Australia, such as battery manufacturer and servicing, engineering and manufacturing of vehicles or parts in Australia;

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This plan is substantial and ambitious, but it is what Australia needs if we are to secure our future. If implemented we will see the way we move transformed and it will make a major contribution to making our cities and regional centres more sustainable and liveable.

The Greens will be releasing a statement outlining their budget savings measures to fund all new policy announcements in the coming weeks.