

## Driving e-mobility Economic stimulus and other support spur development of alternative vehicles

### About the automotive analysis

The following is an analysis by Deloitte Touche Tohmatsu (DTT) Global Manufacturing Industry group summarizing the government economic stimulus efforts and incentives around the world. The data and information was collected and compiled using various external media sources based on information available from around November 2008 to end of February 2010. For the purpose of the analysis, 25 key automotive markets were evaluated spanning

countries in the Americas, Asia-Pacific, and Central and Western European regions. Countries/markets included in the summary are: Argentina, Australia, Austria, Belgium, Brazil, Canada, Central and Eastern Europe, China, Denmark, France, Germany, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Portugal, Russia, South Korea, South East Asia, Spain, United Kingdom, and the United States.



Figure 1:

US \$44 billion on economic stimulus and incentives directed to alternative fuel vehicles – Country by country comparison

Country	Passenger cars (stock per 1,000 people)	Total passenger car sales 2009 (in '000) <sup>&gt;</sup>	Total passenger car forecast 2010 (in '000) <sup>&gt;</sup>	Value of economic stimulus package (in US\$) (as of February 2009)	New economic stimulus funds (in US\$) from March 2009 to February 2010	Value pertaining to auto industry in the economic stimulus package (in US\$) (as of February 2009)	New stimulus funds to auto industry in economic stimulus (in US\$) from March 2009 to February 2010	Stimulus supports alternative fuel technology?	Total alternative vehicle support (\$ billions)	Stimulus incentivizes the replacement of old vehicles?
Argentina <sup>1</sup>	164	369	378	\$36.5B	-	\$1B	-	N	-	N
Australia <sup>2</sup>	573	542	590	\$34B	-	\$5.57B	-	Y	\$1.17B <sup>3</sup>	N
Austria <sup>4</sup>	513	284	283	\$4B	-	\$0.06B	-	Y	\$0.057B <sup>5</sup>	Y
Belgium <sup>6</sup>	484.2	489	473	\$4.46B	-	-	\$0.39B	Y	\$0.39B	N
Brazil <sup>7</sup>	110	2,475	2,623	\$100B	-	\$5.3B	-	N	-	N
Canada <sup>8</sup>	573	759	771	\$32B	-	\$3.28B	-	N	-	N
Central and Eastern Europe <sup>#9</sup>	337.4	767	712	\$10.65B	-	\$0.2B	-	N	-	Y
China <sup>10</sup>	28.3	10,352	11,460	\$586B	-	\$2.23B	-	Y	\$1.5B	Y
Denmark <sup>11</sup>	384	108	121	\$24.42B	\$0.966B	-	-	Y	\$0.548B <sup>12</sup>	N
France <sup>13</sup>	501	2,269	2,093	\$42.5B	-	\$1.32B	\$9.42B <sup>14</sup>	Y	\$8.549B <sup>15</sup>	Y
Germany <sup>16</sup>	478	3,807	3,177	\$110B	-	\$4B	\$4.7B	Y	\$0.950B <sup>17</sup>	Y
India <sup>18</sup>	11.6	1,681	1,940	\$8B	-	-	-	N	-	N
Ireland <sup>19</sup>	424	90	95	\$5.3B	-	-	-	Y	-	Y
Israel <sup>20</sup>	268	175	183	\$5.4B	-	-	-	N	-	N
Italy <sup>21</sup>	581	2,098	2,134	\$103B	\$0.560B	\$2.56B	-	Y	\$0.707B	Y
Japan <sup>22</sup>	493	3,924	4,264	\$421B	\$429B	-	\$3.7B	Y	\$1.20B	Y
Mexico <sup>23</sup>	164	755	810	\$54B	-	\$0.648B	-	N	-	Y
Netherlands <sup>24</sup>	480	388	390	\$42.7B	\$8.0B	-	\$0.129B	N	-	Y
Portugal <sup>25</sup>	423	161	180	\$2.9B	-	-	\$0.034B	N	-	Y
Russia <sup>26</sup>	204	1,466	1,617	\$220B	-	-	-	N	-	N
South Korea <sup>27</sup>	346	1,027	1,115	\$141B	\$12.660B <sup>28</sup>	-	-	Y	\$0.340B <sup>29</sup>	Y
SE Asia <sup>^30</sup>	175.85	886	965	\$33.02B	\$18B	\$0.282B	-	N	\$0.282B	Y
Spain <sup>31</sup>	488	941	1,064	\$14.8B	\$94.2B	\$1.08B	\$5.38B	Y	\$0.576B	Y
UK <sup>32</sup>	513	1,995	1,951	\$34.5B	-	\$3.29B	-	Y	\$0.650B <sup>33</sup>	Y
US <sup>34</sup>	434	10,346	11,400	\$1678B	-	\$50.8B*	-	Y	\$27.4B <sup>35</sup>	Y
			Total	\$3,748.15B	\$563.39B	\$81.62B	\$23.75B		\$44.32B	
			Grand Total	\$4,311.54B		\$105.37B				

> Source: The Economist Intelligence Unit. Data for Mexico also includes information from AMIA – Mexican Association of Automobiles.

^ SE Asia includes – Malaysia, Singapore, Thailand, and Taiwan

# Central and Eastern Europe includes – Czech Republic, Hungary, Poland, Romania, and Slovakia

\* U.S. Auto Stimulus includes \$27.4 billion loan given to companies under Advanced Technology Vehicles Manufacturing Loan Program

1. "Argentina Gives US\$1bn Push To Autos," BMI Industry Insights - Automotives, Americas, December 2008; "Argentina Announces \$32 Billion Stimulus Package," Latin American Herald Tribune, December 2008; "Argentina bolsters size of the stimulus package to US\$32 bn." MercoPress, December 16, 2008.  
- Boost demand: Automakers will each offer two models selling for US\$10,000 or less for people buying a new car for the first time.
2. "\$42 billion nation building and jobs plan," Prime Minister of Australia-Media release, February 3 2009; "Australia unveils massive economic stimulus package," AFP, October 13 2008; "Australia's Auto Industry Gets US\$2.4 Billion Aid Package, Reuters," November 9, 2008.
3. "A new car plan for a greener future," Innovation Minister, Government of Australia, November 10, 2008.  
- R&D Funding: The Green Car Plan – A US\$1.3 billion Green Car Innovation Fund will provide Australian car companies with the opportunity to receive Government funding to design and sell environmentally friendly cars.
4. "Economic Stimulus in Europe – Accelerating Progress towards Sustainable Development?" ESDN Meeting, Prague June 2009.  
- Boost Demand: scrapping scheme - €1,500 cash for car older than 13 years and the new car would meet the Euro-4 emission criteria (limit of 30,000 cars).
5. "Austria EV Stimulus Assumption: Alternative fuel vehicles including hybrid electric vehicles attract bonus of maximum €500. This bonus regime is valid from 1 July 2008 until 31 August 2012," Overview of tax incentives for electric vehicles in the EU- ACEA, April 20, 2010; "Number of EVs calculated on the basis of EV penetration of 7% in Europe as reported in Electric Cars: Plugged In 2," Deutsche Bank, November 3, 2009; Passenger cars forecast for 2010, 2011, and 2012 sourced from EIU.
6. "Estimating the size of the European stimulus packages for 2009," Bruegel, February 20, 2009; "Purchasers of electric cars receive a personal income tax reduction of 30% of the purchase price," Overview of tax incentives for electric vehicles in the EU- ACEA, April 20, 2010.
7. "Brazil spends \$US94.8 bln in economic stimulus measures," Xinhua News Agency, December 18, 2008; "In Brazil, Whiplash on Assembly Lines, Washington Post Foreign Service," December 1, 2008; "Auto industry gets US\$1.8 billion credit line in Sao Paulo," Xinhua, November, 2008.  
- Boost Demand: US\$5.3 bn credit made available through banks.
8. "Canada unveils stimulus package," BBC News January 28, 2009; "Canada to aid car manufacturers," BBC News, January 28, 2009.  
- Restructuring of auto companies
9. "Hungarian economy minister announces Ft 1.4 trillion stimulus package," realdeal.hu, November 13, 2008; "Czech, Hungarians unveil stimulus, Romania mulls IMF," Reuters, February 16, 2009. "Slovakia approves 332 mln euro stimulus package," Reuters, January 28, 2009; "Slovakia in automobile scrappage fever," Wien International, April 23, 2009.
10. "China Announces Massive Stimulus Package," Forbes, November 9, 2008; "China issues stimulus package for auto sector," Channel News Asia, January 15, 2009; "China's Now the World's Largest Car Market: Leaner, Greener Detroit?," Newsweek, April 29, 2009.  
- Boost Demand: Reduction in sales tax from 10% to 5%; 5 billion yuan subsidies for farmers who opt to replace three-wheeled vehicles or outdated trucks with new, small vehicles  
"China issues stimulus package for auto sector: state media," AFP, January 14, 2009.  
- R&D and Subsidy for alternative-energy vehicles: US\$1.5bn to auto makers to develop alternative energy technology and subsidies of nearly \$8,800 offered to local government agencies and taxi fleets in 13 cities for hybrid vehicle. "China issues stimulus package for auto sector: state media," AFP, January 14, 2009.
11. "The Role of Government Debt Management Offices in the Light of the Financial Crisis; Denmark unveils new DKK 5 bn stimulus package," Forex pros.com, August 2009.
12. "Denmark EV stimulus Assumption: Danish govt in Dec 2009 announced a US\$40,000 tax break (180% for other ICE cars) on each electric car until 2012," Deloitte Analysis; "Denmark Leads Europe's Electric-Car Race," TIME, February 14, 2010; "The Electric-Car Future Creeps a Little Closer," Progressivefix, December 2, 2009.  
- Number of EVs calculated on the basis of pure EV penetration of 3.5% in Europe (2015) as reported in Electric Cars: Plugged In 2, Deutsche Bank, November 3, 2009; Passenger cars forecast for 2010, 2011, and 2012 sourced from EIU.
13. "French €26bn stimulus plan to boost investment," France 24, December 4 2008; "France unveils huge stimulus plan," BBC News, December 4, 2008.
14. "French government to provide 7 billion euros aid to manufacturers," caradvice.com.au, February 10, 2009.  
- PSA and Renault to get US\$3bn soft loan to fund projects to develop low emission vehicles.
15. "France Gives US\$549 Million in Hybrid and Electric Car R&D Funding to Automakers," Motor Trend, December 2008.
16. "Germany's second stimulus package for the economy is worth € 50 billion," GIC Pretoria, January 13, 2009; "Germany approves €50bn stimulus package," The Guardian, January 29, 2009; "Second German stimulus package in the EU context," Bruegel, January 19, 2009; "German Government Announces Auto Industry Financial Support Package," IHS Global Insights, January 14, 2009; "Mandelson announces extension of car scrappage scheme," Guardian, September 28, 2009.  
- Germany offered loan guarantee of US\$2bn for German automakers and \$3300 as scrappage of old automobiles; The German car scrappage scheme was extended with upper limit at €5bn.
17. "Infineon gears up to drive Europe's E3Car research project," EE Times, October 13, 2009; "Green Supply Line; Federal Government is funding electric mobility to the tune of Euro 700 million with aim to have one million electric vehicles on German roads by 2020." "Infineon gears up to drive Europe's E3Car research project," GreenSupplyLine.com, October 13, 2009.
18. "Analysis based on India's Stimulus Package: More Help Needed," Business Week, December 9, 2008.
19. "Global Economic Downturn – International Response," HM Treasury, February 2009.
20. "Israel: Don't Mention The Economy," Forbes, September 2009.
21. "Italy Approves Stimulus Plan, Analysts Sceptical," Forbes, November 28, 2008; "Italy unveils 2 bln euro car stimulus package," Reuters, February 6, 2009; "Italy offers 420 million euros in incentives," France 24, March 19, 2010.  
-Italy EV Stimulus Assumption: €3,000 - €3,500 incentive for EV purchase, Deloitte Analysis; "Number of EVs calculated on the basis of pure EV penetration of 3.5% in Europe (2015) as reported in Electric Cars: Plugged In 2," Deutsche Bank, November 3, 2009; "Passenger cars forecast for 2010, 2011," EIU, April 20, 2010

22. "Japan Tries To Prod Citizens To Spend," *Forbes*, October 30, 2008; "Japanese Leader Offers a Vast Stimulus Package," *The New York Times*, December 13, 2008; "Japan Drafts \$154.4 Billion Stimulus," *The New York Times*, April 9, 2009; "Japan Adopts Scrappage Program in Its Economic Stimulus Plan," *Auto Observer*, April 9, 2009; "Japan to boost recovery with huge new stimulus," *france24*, December 8, 2009.  
- "Japan EV stimulus Assumption: Japan, the world's third-largest car market, also lowered taxes on April 1 on clean-emission cars in a move that the auto industry lobby estimated would add 310,000 vehicles in sales in the 2009/10 business year. That means consumers replacing an old car to buy a new Toyota Prius hybrid car could save a total of about \$4,000. Japan to offer cash to scrap old cars, buy new ones," *Reuters*, April 9, 2009.
23. "Stimulus Plan to Curb Impact of Crisis, Inter Press Service News Agency," January 7, 2009; "Mexican Government Offers US\$648 mil. in Aid to Auto Industry," *Global Insight Daily Analysis*, February 18, 2009.
24. "Dutch PM unveils six-bln-euro stimulus plan," *EU Business*, March 25, 2009; "Netherlands to introduce car trade-in bonus," *Expatica*, April 4, 2009; "Banking Rescue and Economic Recovery Plans in the Netherlands and Other EU Member States," *Center and EBC, Tilburg University and CEPR*, February 5, 2009.
25. "Portugal announces two-billion-euro stimulus plan," *EU Business*, December 13, 2008; "Support the scrappage scheme! - European schemes: How they work," *What Car*, March 31, 2009.
26. "Russia to Tap Oil Wealth; Drawing on Reserves Will Help Government Maintain Spending," *Wall Street Journal*, November 27, 2008.; "Crisis' a word best spoken quietly in Russia," *Reuters*, December 15, 2008.
27. "Seoul approves \$130 bn package for financial sector," *Indo Asian News Service*, October 19, 2008; "South Korea unveils \$11 billion economy package," *Reuters*, November 2, 2008.
28. "South Korea unveils new stimulus measures," *The China Post*, February 27, 2009; "South Korea to propose \$12 bln stimulus package," *Reuters*, March 17, 2009.
29. "Electric Cars: Plugged In 2," *Deutsche Bank*, November 3, 2009.
30. "31,046 Baucer Rebat RM5,000 Untuk Tukar Proton & Perodua Lama Kepada Yang Baru Habis Dilanggan," *M Star*, November 16, 2009; "Economic Stimulus Malaysia," [rangsanganekonomi.treasury.gov.my](http://rangsanganekonomi.treasury.gov.my). Web site accessed on March 13, 2010; "Economic stimulus Thailand, Malaysia spend billions to boost economy," *Asean Affairs*. September 18, 2008; "Singapore unveils \$13.7bn stimulus package," *FT.com*, January 22, 2009.
31. "Spain stumps up €4bn to protect car sector," *EU Observer*, February 2, 2009; "Spain unveils 11 billion economic stimulus package," *The International Herald Tribune*, November 27, 2008.  
- A total of €420 million is slated for research projects and tax breaks for research spending and development of new, greener vehicles.
32. "Britain launches stimulus plan to fight recession threat," *Agence France Presse*, November 24, 2008; "Is Britain's Stimulus Plan a Wise Move?" *Britain Business Week*, November 24, 2008; "British Government Presents £2.3-bil. Automotive Aid Package," *Global Insight Daily Analysis*, January 28, 2009.
33. "Government Response to the New Automotive Innovation & Growth Team Report," *Department for the Business, Innovation and Skills*, November 2009; "UK government to pay 25 percent of electric car price," *Reuters*, February 25, 2010.  
- Boosting demand: From 2011, UK government will pay 25% of vehicle cost for EVs and PHEV's (£230mn funding) as a part of "Low Carbon Vehicle Innovation Platform"; £140mn invested in technology.
34. "Obama signs \$787B US stimulus package into law," *CBC News*, February 17, 2009; "Congress passes bailout, focus shifts to fallout," *Reuters*, October 3, 2008; "Congress leaders announce tentative \$700 billion Wall Street bailout plan," *NY daily News*, September 28, 2008; "The Wall Street Bailout Plan, Explained," *The New York Times*, September 21, 2009; "Bush Announces \$17.4 Billion Auto Bailout, U.S. News Rankings," December 19, 2008; "Bush signs stimulus package," *USA Today*, February 13, 2008.
35. "Stimulus Package Delivers \$2.4 Billion for Electric Vehicle Projects," *Environmental Leader*, March 20, 2009; "US loans \$8 billion to carmakers to make fuel-efficient cars," [www.domain-b.com](http://www.domain-b.com), June 24, 2009.

## **Deloitte Touche Tohmatsu (DTT) Global Manufacturing Industry**

The Global Manufacturing Industry group is comprised of more than 750 partners and 12,000 industry professionals in Deloitte member firms in over 45 countries. The team's deep industry knowledge, service line expertise, and thought leadership allows them to solve complex business issues with member firm clients in every corner of the globe. Deloitte member firms attract, develop, and retain top professionals and instill a set of shared values centered on integrity, value to clients, and commitment to each other and strength from diversity. Deloitte member firms provide professional services to 80% of the manufacturing industry companies on the Fortune Global 500®. For more information about DTT Global Manufacturing Industry, please visit [www.deloitte.com/manufacturing](http://www.deloitte.com/manufacturing).

### **About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu, a Swiss Verein, and its network of member firms, each of which is a legally separate and independent entity. Please see [www.deloitte.com/about](http://www.deloitte.com/about) for a detailed description of the legal structure of Deloitte Touche Tohmatsu and its member firms.

Deloitte provides audit, tax, consulting, and financial advisory services to public and private clients spanning multiple industries. With a globally connected network of member firms in more than 140 countries, Deloitte brings world-class capabilities and deep local expertise to help clients succeed wherever they operate. Deloitte's approximately 169,000 professionals are committed to becoming the standard of excellence.

This publication contains general information only, and none of Deloitte Touche Tohmatsu, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.