



Advancing the Deployment of Electric Vehicles: Market and Policy Outlook for Electrifying Transportation

Genevieve Cullen, Vice President, EDTA



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Promoting Clean, Sustainable Transportation Technologies

Market Outlook

- Late 2010, GM Volt & Nissan Leaf first mass-market plug-in electric vehicles
- ~ 20 plug-in EV models expected by the end of 2012, including plug-in Prius hybrid, battery electric Ford Focus
- National and regional charging infrastructure beings installed rapidly. Projected cumulative investment of \$5-10 billion by 2015



- The total number of **plug-in vehicles (including plug-in hybrids and battery EVs)** sold in August 2012 was **4,715**.
 - OVER PREVIOUS MONTH: 56.3% increase
 - 3,016 sold in July 2012.
 - OVER THIS MONTH LAST YEAR: 183.2% increase
 - 1,665 sold in August 2011.
- There have been **25,290 total plug-ins (including plug-in hybrids and battery EVs)** sold in 2012. This is a 170.5% increase over this time last year.



Vehicles Available Now

Battery Electric Vehicles

AMP M1e

Coda Sedan

Ford Transit Connect Electric

Ford Focus BEV

Honda Fit EV

Mitsubishi i-MiEV

Nissan LEAF

Smart fortwo EV

Tesla Model S

Plug-In Hybrids

Chevrolet Volt

Fisker Karma

Toyota Prius Plug-In Hybrid

Via Motors Vtrux

Fuel Cell Electric Vehicles

BMW Hydrogen 7*

Honda FCX Clarity*

Mercedes-Benz B-Class*



Vehicles Available Now

Hybrid Electric Vehicles

Acura ILX

BMW ActiveHybrid 7L

Buick Regal eAssist

Cadillac Escalade Hybrid

Chevrolet Malibu Hybrid

Chevrolet Silverado 15 Hybrid

Chevrolet Tahoe Hybrid

Ford Escape Hybrid

Ford Fusion Hybrid

GMC Sierra 15 Hybrid

GMC Yukon 1500 Hybrid

Honda Civic Hybrid

Honda CR-Z

Honda Insight

Hyundai Sonata Hybrid

Infiniti M35h

Kia Optima Hybrid

Lexus CT 200h

Lexus HS 250h

Lexus LS 600h L

Lexus RX 450h

Lincoln MKZ Hybrid

Mercedes-Benz ML450 Hybrid

Mercedes-Benz S400 Hybrid

Porsche Cayenne S Hybrid

Porsche Panamera S Hybrid

Toyota Camry Hybrid

Toyota Highlander Hybrid

Toyota Prius

Toyota Prius c

Toyota Prius v

Volkswagen Touareg Hybrid



Vehicle Announcements

Battery Electric Vehicles

Chevrolet Spark EV
Fiat 500 EV
Mercedes-Benz B-Class electric drive
Mercedes-Benz SLS AMG Coupé Electric Drive
Nissan e-NV200
Tesla Model X
Toyota eQ
Toyota RAV4 EV
Volkswagen Golf EV

Fuel Cell Electric Vehicles

Announced models from

Ford
GM
Hyundai ix35 Fuel Cell
Nissan
Toyota sedan-type FCV

Plug-in Hybrid Electric Vehicles

Audi Q plug-in
BMW i8
Cadillac ELR
Fisker Atlantic
Ford C-MAX Energi

Plug-in Hybrid Electric Vehicles (continued)

Ford Fusion Energi
Honda Accord Plug-in
Infiniti LE
Mazda unknown name
Mercedes-Benz S-Class Plug-In
Mitsubishi Outlander Plug-in
Porsche 918 Spyder PHEV
Suzuki Swift PHEV
Volkswagen Jetta PHEV
Volkswagen Passat PHEV
Volvo V60 Plug-In Hybrid

Hybrid Electric Vehicles

Audi A8 Hybrid
Audi Q7 Hybrid
Ferrari HY-KERS Hybrid
Ford C-MAX Hybrid
Honda new hybrid
Lexus ES 300h
Lexus GS 450h
Mercedes C-Class Hybrid
Mercedes E-Class Hybrid
Suzuki Kizashi Hybrid
Toyota (new or renewed 21 hybrids by 2015)



- **Speed Technology Advances**
- **Address Market Hurdles**
- **Update Regulations**



Electric Drive Acceleration Policies

Speed Technology Breakthroughs

Public/Private Research, Development & Demonstration

EV Everywhere – build on DOE's technology and deployment efforts



Address Market Hurdles – Reinforce private and regional investments in electrification

- Alternative fuel infrastructure credit
- Plug-in electric drive vehicle credit
- Look beyond light duty
- Support for federal, state and local deployment, readiness, education
 - Clean Cities program deployment efforts
 - DOT resources for alternative fuel vehicles and infrastructure
 - Information sharing on infrastructure, state and local incentives



Update Regulations

New technologies recognized in old regulatory structures for power and transportation: capture benefits of vehicle electrification in air quality and vehicle efficiency policies

- EPA/NHTSA – correctly measure the benefits; equitable treatment
- Utility policies that promote investment in smart grid, off-peak pricing programs, readiness
- Update Federal regulations governing state and fuel provider fleets



1250 I St., NW

Suite 902

Washington, DC 20005

gcullen@electricdrive.org

electricdrive.org

202-408-0774

 **@electricdrive**

