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

Genevieve Cullen, Vice President, EDTA

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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 Mle
Coda Sedan
Ford Transit Connect Electric
Ford Focus BEV
Honda Fit EV
Mitsubishi i-MiEV
Nissan LEAF
Smart fortwo EV
Tesla Model S

Fuel Cell Electric Vehicles
BMW Hydrogen 7*
Honda FCX Clarity*
Mercedes-Benz B-Class*

Plug-In Hybrids
Chevrolet Volt
Fisker Karma
Toyota Prius Plug-In Hybrid
Via Motors Vtrux

* Limited R
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Promoting Clean, Sustainable Transportation Technologies
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

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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)

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Reaching Commercial Scale

• 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
Electric Drive Acceleration Policies

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