Ford’s Sustainability Strategy

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Sustainability & Vehicle Environmental Matters

Marketing New Powertrain Technologies:
Strategies in Transition
Oakland University
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Our vision for the 21st century is to provide SUSTAINABLE transportation that is affordable in every sense of the word:

**Environmentally, Socially & Economically**

“Improved sustainable performance is not just a requirement, but a tremendous business opportunity.”

- Bill Ford
Sustainability at Ford

Meeting the needs of the present without compromising the future.

- **Environmental**
  - CO₂
  - Energy Security

- **Economic**
  - Profitability
  - Cash Flow

- **Social**
  - Human Rights
  - Working Conditions

**Product Process**
- Manufacturing
- Dealers
Technology Innovation Pillars

Anticipate – Innovate – Incorporate

Sustainability “GREEN”
- Improve fuel economy; reduce CO2 emissions to leadership levels
- More renewable, recycled materials
- Improved In-Vehicle Air Quality

Safety “SAFE”
- Achieve public domain targets and 3rd Party Recommended Buys
- Safety technology / feature content equal or better than competition
- Breakthrough features for family safety

Design “SMART”
- Design leadership on each new program
- Exciting interiors: leadership in comfort / convenience, infotainment technology
- Global platforms with right proportions
- Improve emotional appeal

A CLEAR TECHNOLOGY STRATEGY WHICH SETS PRIORITIES AND GUIDES ACTIONS TO ACHIEVE OUR VISION FOR BRINGING AFFORDABLE TECHNOLOGY TO MILLIONS.
Process to Manage Sustainability for Our Products

- **SCIENCE**
  - Stabilization Approach

- **GOVERNMENT**
  - Regulatory Trends

- **CONSUMER**
  - Market Trends

- **COMPETITIVE**
  - Industry Trends

**Product CO₂ Strategy**
Deliver Vehicle Contribution to CO₂ Stabilization

- Technology Plan
- Policy Positions
- Cycle Plan
- Marketing and Communications Plan

**Sustainable Mobility Governance Team**
Science – Stabilizing Atmospheric CO$_2$ Levels
Ford’s Path to Sustainability

Near Term
Begin migration to advanced technology

Mid Term
Full implementation of known technology

Long Term
Continue leverage of Hybrid technologies and deployment of alternative energy sources

Near Term
Advanced Gasoline Engines
Hybrids
Natural Gas

Mid Term
Electrified Vehicles
Weight Reduction

Long Term
Fuel Cells
Hydrogen Powered Engines
Leveraging Global Platforms

Plug & Play into High Volume Platforms with Global

[Diagram showing different types of vehicles: HEV, PHEV, BEV, Diesel Engine, Gas Engine, Bio-fuel]
Introduction of EcoBoost Technology

- Gasoline Direct Injection
- Turbocharging
- “Downsizing & Boosting”
3.5-liter version of the engine contributes 125 new patents and patent applications for Ford
Ford Flex Fuel Vehicles

- More ethanol is produced and used in the U.S. than the amount of gasoline imported by the U.S. from Saudi Arabia and Iraq combined.

- Between 2006 and 2010 model years, Ford delivered on its pledge to double the number of flexible-fuel vehicles produced in the U.S.

- Ford Flex Fuel Vehicles include:
  - Escape
  - Fusion
  - F-150
  - Expedition
  - E-Series
  - Lincoln Navigator
  - S-Duty
Compressed Natural Gas (CNG) is a clean-burning fuel that significantly reduces CO, CO2 and NOx.

CNG Transit Connect taxis are used in Chicago, Los Angeles, Philadelphia, Boston, and San Francisco.

Ford CNG vehicles include:
- E-Series
- Transit Connect
- Super Duty Chassis cab
- Super Duty pickup
- Medium Duty
Electrification Strategy

- **Transit Connect BEV**
  - 2010

- **Focus Electric BEV**
  - 2011

- **C-Max Energi Plug-In Hybrid**
  - 2012

- **Fusion Hybrid/Plug-In Hybrid**
  - 2013
### Electrification Projects – US and Europe

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<th>2010 CY</th>
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<td>TRANSIT CONNECT ELECTRIC</td>
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**Ford’s Industry-unique Approach will Deliver 5 New Electrified Vehicle Alternatives for US Customers by 2012 and for European Customers by 2013.**
Ford’s Global Platform
2020 MY Electrification Volume Projections

- **U.S.**: 3.0 Mils.
  - BEV: 0.5
  - PHEV: 0.8
  - HEV: 2.7
- **Europe**: 1.5 Mils.
  - BEV: 1.9
  - PHEV: 0.8
  - HEV: 0.2
- **China**: 1.0 Mils.
  - BEV: 1.5
  - PHEV: 0.2
  - HEV: 0.2
- **Japan**: 0.2 Mils.
  - BEV: 0.2
  - PHEV: 0.8
  - HEV: 0
Ford Focus Electric

INNOVATIVE DESIGN

REMOVABLE, UPGRADABLE, SERVICEABLE

3-4 HOUR CHARGE ON 240V HOME OUTLET

VALUE CHARGING
Charging

Charge Schedule:
Start: 1/12/2011 @ 8:00 pm
End: (approx) 9:30 pm

Next Ready to Go Time:
1/13/2011 @ 8:00 am, 72°F
Ford’s Mobile Apps

Mike’s EV is at Home, charging
1h 40m until fully charged

51% 51mi

Updated 5 mins ago