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# World Light-Duty Green Vehicles

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Industry Study with Forecasts for **2013 & 2018**

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Study #2510 | August 2009 | \$5700 | 317 pages

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*Gains in demand will be driven by intensified government support, technology breakthroughs, increasingly erratic oil prices, and concerns about the environment and energy independence.*

## Global demand to expand rapidly through 2013

Worldwide demand for light-duty “green” vehicles will expand rapidly to four million units in 2013, propelled by a confluence of intensified government support, technology breakthroughs and increasingly erratic oil prices. These environmentally friendly light vehicles -- hybrid-electric vehicles (HEVs), plug-in hybrid-electric vehicles (PHEVs), pure electric vehicles (EVs) and natural gas vehicles (NGVs) -- will begin to penetrate the world light vehicle market in response to increasing concerns regarding carbon dioxide emissions, energy independence and overall “sustainability” issues. Cost disparities between green and conventional light vehicles currently range from about \$3,000 for conventional HEVs to more than \$10,000 for some PHEVs and EVs. With much green vehicle demand dependent on government subsidies, governments already reeling from a continuing severe global economic downturn could find such subsidies unsustainable if significant volumes do materialize.

## US green vehicle market to lead demand in Triad

Within the Triad, the US market is expected to experience the highest levels of demand for green vehicles, due to erratic fuel costs, the market’s unique and rising Corporate Average Fuel Economy (CAFÉ) requirements, and the relative lack of demand for light vehicle diesels. Despite being less cost-effective



than conventional internal combustion engine (ICE) vehicles, electrified green vehicles have begun to carve out a loyal fuel-efficiency focused niche in the US market. Moving beyond this niche status will be the primary industry challenge going forward.

Green vehicle demand in Western Europe, where overall light vehicle diesel sales already exceed 50 percent of the total market, will be significantly lower than in the US, although some bright spots for selected green technologies, such as Italy’s preference for NGVs, will persist. Japan will see increased demand for green vehicles going forward, as government agencies and allied associations continue to put tax and other incentives in place to stimulate

demand and OEMs introduce new models.

## China, India to become key green vehicle markets

Elsewhere in the Asia/Pacific region, both China and India are expected to become key green vehicle markets over the next ten years, due to government interest in dealing with mobile emissions, and because local production is planned. Other regions of the world will likely remain focused on NGVs, due to the low expense involved in converting them from conventional light vehicles, and the relative cheapness of natural gas compared to gasoline or diesel fuel.

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## Sample Text, Table & Chart

### WESTERN EUROPE

#### France: Green Vehicle Demand by Type

Demand for green vehicle in France is expected to rise r  
 000 units in 2013. Demand will b  
 id and electric vehicle technologi  
 and by the significant support th  
 offer in terms of subsidized loans, l  
 icture support. Demand will be t  
 damaged economy and the high tax- and fee-  
 in owning and operating an automobile.

The French market has been a leader in the penetration of light  
 vehicle diesels, registrations of which comprised roughly 80 percent  
 of the total market in 2008. However, French OEMs have also been  
 European leaders in the introduction of alternative fuel vehicles. PSA,  
 for example, has been an early experimenter with many new and fuel  
 efficient powertrain technologies. Peugeot produced several thousand  
 hybrid vehicles for the European commercial market for use as delivery  
 vehicles prior to 2004, but ended the experiment due to the higher cost  
 compared to traditional diesel engines.

Demand for NGVs will remain low in France, with just over 10,000  
 NGVs of all sizes on the road in 2008 and just over 100 fueling stations,  
 97 of which are privately owned. The auto industry and government  
 agencies are focused more intently on supporting the propagation of  
 PHEVs and EVs, in part because of France's structural advantages in  
 terms of electricity generation. Over 75 percent of the country's electric-  
 ity is produced by low-carbon-dioxide-emitting nuclear power.

Nonetheless, PSA Peugeot Citroen does offer light vehicles that in-  
 corporate CNG technology. For example, in France and other European  
 countries, PSA Peugeot Citroen produces and sells the CITROEN C3  
 five-seater car, which is engineered to run on CNG or gasoline. The

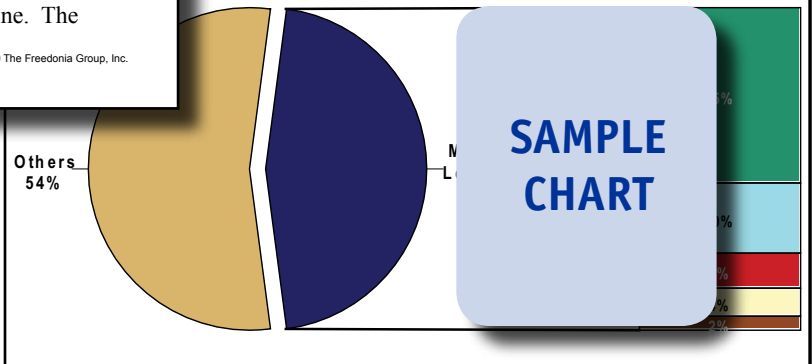
**TABLE V-6**  
**FRANCE LIGHT-DUTY GREEN VEHICLE DEMAND BY TYPE**  
**(000 units)**

Item	1998	2003	2008	2013	2018
Light Vehicle Demand	2				
% green					
Light-Duty Green Vehicle Demand					
Natural Gas Vehicles					
Conventional Hybrid-Electric Vehicles					
Pure Electric Vehicles					
Plug-In Hybrid Vehicles					

**SAMPLE TABLE**

**SAMPLE TEXT**

**CHART VIII-1**  
**LIGHT-DUTY GREEN VEHICLE MARKET SHARE, 2008**  
**(1.8 million units)**



## Sample Profile, Table & Forecast

### COMPANY PROFILES

#### Tesla Motors Incorporated

1050 Bing Street  
 San Carlos, CA 94070  
 650-413-4000  
<http://www.tesla.com>

Annual Sales:  
 Employment:

Key Products:

Tesla Motors is a privately held electric, zero-emission car manufacturer. The privately held company sells its electric vehicles (EVs) in the US and Europe. In May 2009, Daimler AG (Germany) purchased an equity stake of nearly ten-percent of Tesla Motors.

The Company participates in the world green vehicle industry through the production and sale of TESLA ROADSTER EVs, as well as the development of new EVs and related technologies through its independent operations and cooperative partnerships with third-party firms. Tesla Motors operates mainly via its headquarters and research development site in San Carlos, California. The Company plans to relocate the operations of the San Carlos site to a consolidated campus in San Jose, California. Other operations include a research and development office in Rochester Hills, Michigan; two sales and service facilities in Menlo Park, California; and a sales and service center in London, the UK, which opened in April 2009. In October 2008, in relation to the Company's consolidation plans, Tesla Motors announced its intentions to close the Rochester Hills site.

TESLA ROADSTER two-door models accelerate from 0 to 60 in about four seconds and have a top speed of approximately 200 km per

**SAMPLE  
PROFILE**

TABLE V-5

### FRANCE MACROECONOMIC INDICATORS & LIGHT DUTY GREEN VEHICLE SUPPLY & DEMAND (000 units)

Item	1998	2003	2008	2013	2018
Population (mil persons)					64.5
GDP/capita					30
Gross Domestic Product (bil 2007\$)					50
Households (mil units)					6
vehicle/000 capita					2
vehicle/mil \$ GDP					1
vehicle/000 households					7
Light Vehicle Demand % green					5.8
Green Vehicle Demand					5
net exports & sales from inventory					5
Green Vehicle Production					60
Light Vehicle Park (mil units) % green					0.8
Green Vehicle Park					100

**SAMPLE  
TABLE**

"HEV demand in France is expected to grow strongly from a small base as regional automakers, including France's PSA, introduce more models. PSA Peugeot Citroen's hybrid HDi combines a 1.6-liter diesel engine, a particulate filter system, a stop-start system, and a high voltage battery pack. Even though Renault has criticized HEVs as a green solution, the company has recently developed an HEV concept vehicle, the ONDELIOS hybrid concept car, which ..."

--Section V, pg. 122



**OTHER STUDIES**

**World Motorcycles**  
(including Electric Bicycles & Mopeds)

Global motorcycle demand will grow 7.6% per year through 2013, driven by rising living standards in developing areas that make motorcycles more affordable to use. ICE motorcycles will remain dominant while electric types lead gains. Sales in the Africa/Mideast and Asia/Pacific markets will grow the fastest. This study analyzes the 79.2 million unit world motorcycle industry, with forecasts for 2013 and 2018 by product, world region and for 21 countries. It also evaluates market share and profiles industry players.

#2537 ..... 08/2009..... \$5700

**World Fuel Cells**

Global commercial fuel cell demand will triple through 2013 in dollar terms. Portable fuel cell systems will remain the dominant application by unit, while electric power generation will continue as the top use in value terms. PEM chemistry fuel cells will strengthen their dominant position over the next decade. This study analyzes the \$570 million world fuel cell industry, with forecasts for 2013 and 2018 by product, chemistry, application, world region and for 15 national markets. It also details market share and profiles major players.

#2502 ..... 05/2009..... \$5800

**Medium- & Heavy-Duty Truck Aftermarket**

The US aftermarket for medium- and heavy-duty (MD/HD) truck parts will grow 3.8% annually through 2013. Exterior and structural components such as tires will remain the largest segment, while electrical and electronic components see the fastest gains. Outsourced service providers will continue to dominate, led by tire dealers. This study analyzes the \$14.2 billion US MD/HD aftermarket, with forecasts for 2013 and 2018 by product and service performer. It also evaluates market share and profiles industry players.

#2481 ..... 04/2009..... \$4600

**World Diesel Engines**

Global diesel engine demand is forecast to rise 3.5% yearly through 2012. The Asia/Pacific region will remain the largest market while North America will be among the fastest growing based on increased heavy vehicle output and use of diesel engines in light vehicles. Stationary power will be the fastest growing end use segment. This study analyzes the \$129 billion world diesel engine industry, with forecasts for 2012 and 2017 by market, world region and for 26 countries. It also details market share and profiles industry players.

#2470 ..... 04/2009..... \$5700

**World Buses**

Global bus demand will rise 5% yearly through 2012. Gains will be driven by high fuel prices, which will boost bus ridership and prompt bus fleet expansions and upgrades to more efficient vehicles. China is the largest market for and producer of buses, and will be the biggest driver of demand going forward. This study analyzes the 324,000 unit world bus market, with forecasts for 2012 and 2017 by type, world region and for 19 countries. It also evaluates company market share and profiles industry competitors.

#2366 ..... 07/2008..... \$5600

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