

France

Country spotlight

Population (million) (World Bank, 2016a):	66.8
Urban population (% of total) (World Bank, 2016b):	80%
GDP per capita (2014 USD/year) (World Bank, 2016c):	36 200
Average price gasoline and diesel (USD cent per L, 2014) (GIZ, 2015):	179; 163
Fuel tax class (2014) (GIZ, 2015):	highly taxed petroleum fuels

In 2015, almost 2.3 million LDVs were sold in France (IHS Markit, 2016). The on-road vehicle stock amounted to about 30 million cars (IEA, 2016a), and LDV ownership averaged 0.45 LDVs per capita. Voluntary CO₂ emission standards were first introduced in the European Union in 1998, and they became mandatory in 2009. The 2015 target of 130 g CO₂/km for passenger cars was met ahead of schedule in the case of France (EEA, 2016). By 2021, average passenger car CO₂ emissions are required to reach 95 g CO₂/km (based on NEDC). LCVs are required to attain 147 g CO₂/km (based on NEDC) (TransportPolicy, 2016). In addition to the EU emission standards, France introduced a feebate scheme in 2008 (revised on a regular basis in the following years) that redistributes revenues from taxation on vehicles with high specific fuel consumption to vehicles with superior performance. In its latest update, fees can reach up to EUR 8 000, while rebates can be as high as EUR 6 000 per vehicle (MEEM, 2016). A label that displays specific fuel consumption, CO₂ emissions and efficiency class was made mandatory in France in 2006 (MEEM, 2012).

Market profile and vehicle characteristics

France produced almost 2 million cars in 2015, placing it as the third-largest LDV producer in the European Union since 2014. The production was dominated by French manufacturers PSA (Peugeot and Citroën) and Renault-Nissan (OICA, 2016).

Average per kilometre CO₂ emissions have continuously declined in France since 2005. After an acceleration in improvement between 2010 and 2013, specific CO₂ emissions declined at a slower pace between 2013 and 2015. In 2015, average CO₂ emissions of newly registered LDVs were 120 g CO₂/km. The 90-120 g CO₂/km segment represented almost 50% of sales in 2015, while the market share of high-emission segments has shrunk. Average fuel economy of new LDVs steadily progressed, attaining 5.3 Lge/100 km in 2014 and 5.2 Lge/100 km in 2015.

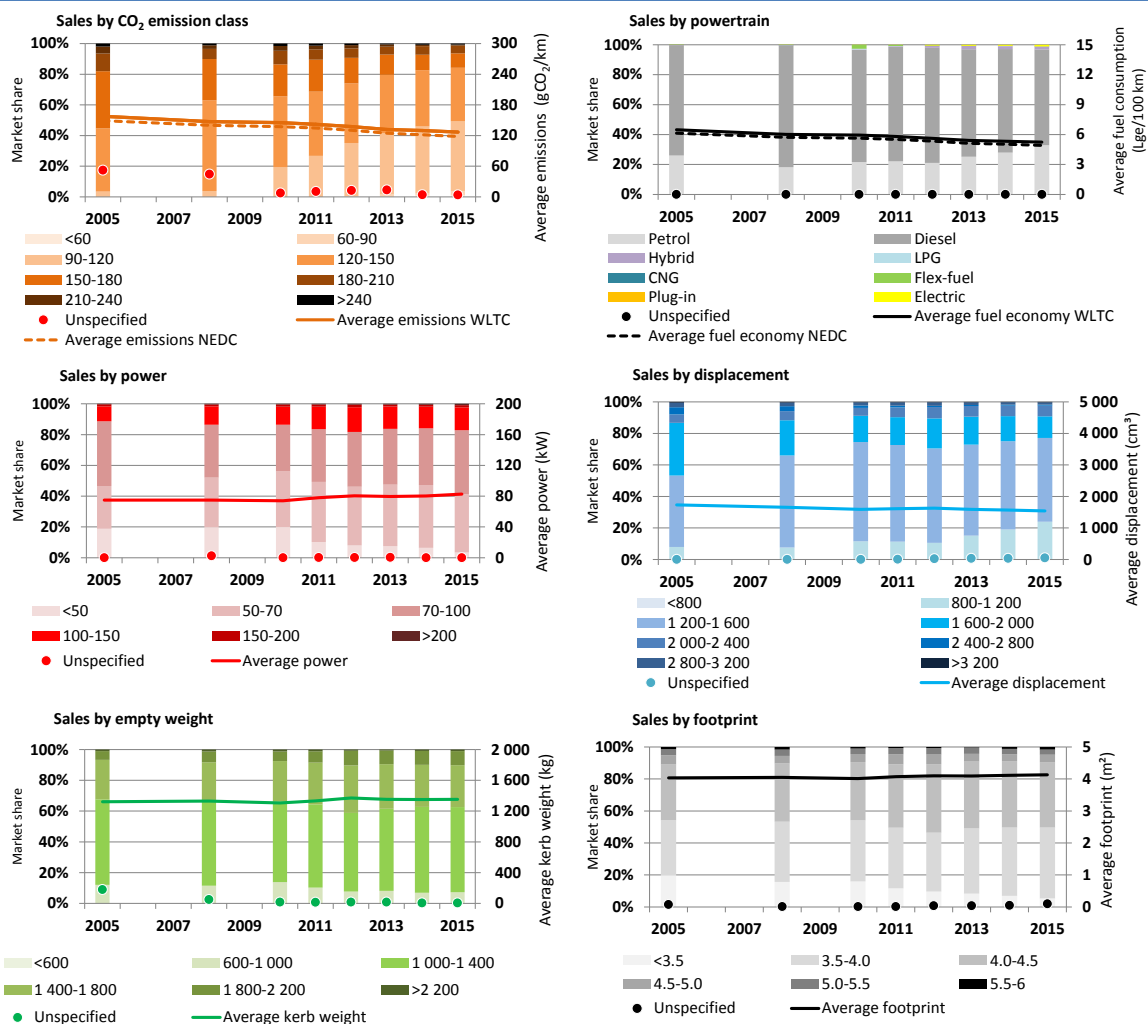
Diesels have continued to lose market share from 2013, declining from 72% to 65% market share in 2015, while gasoline LDVs represent 32% of the market. More advanced powertrains gained market shares too, although they did not exceed 3% of the LDV market in 2015. Electric vehicles reached a 1% market share in 2015.

Over the past three years, average power rose modestly from 80 kW in 2013 to 83 kW in 2015. Newly registered French LDVs were almost 20% less powerful than their German or British counterparts, yet similar to Italian ones. After a slight increase between 2010 and 2012, average engine displacement declined to 1.5 L in 2015. The market share of vehicles with 0.8-1.2 L engines saw the most growth, while the market share of vehicles with 1.6-2.0 L engines has declined.

Between 2013 and 2015, the average weight of new LDVs fluctuated around 1 350 kg with no clear change in the market share of weight classes. The average footprint of newly registered vehicles grew slightly from 2010 onward. In 2015, the average footprint in France was a little more than 4.1 m², equal to the global average. Vehicles with a footprint of less than 3.5 m² almost disappeared,

conforming to a trend of diminishing sales of small vehicles across OECD countries, but the average footprint across the past decade remained nearly the same (Figure 48).

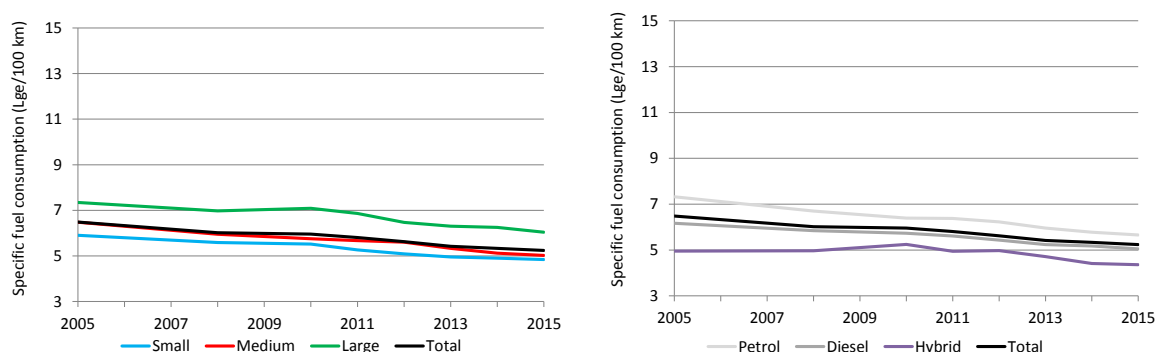
Figure 1 • LDV market by g CO₂/km, powertrain, power, displacement, weight and footprint, France, 2005-15



Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

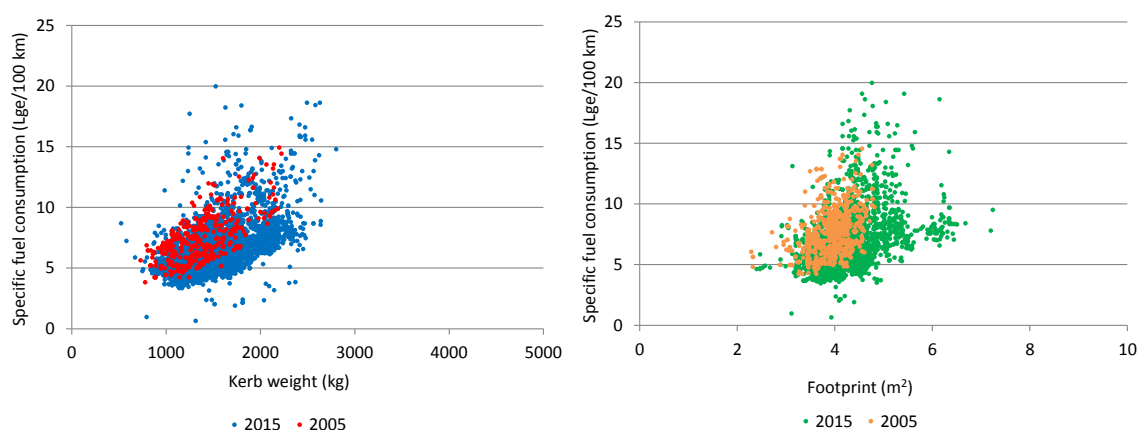
Analysis of fuel economy trends

The average fuel economy of newly registered small and medium LDVs converged between 2012 and 2015 (Figure 2). The average specific fuel consumption of large vehicles improved after 2010, reaching 6 Lge/100 km in 2015. This efficiency level is equal to total average fuel economy in Japan or Germany, showing clear differences among advanced LDV markets. All powertrains are gaining efficiency, although new diesels are still 10% more efficient than new gasoline-powered LDVs of comparable size, weight, and performance. Diesels represent more than 50% of new registrations in all market segments, with an average fuel consumption for diesels of 5 Lge/100 km. In 2015, Hybrids drove down total sales-weighted specific fuel consumption with an average of 4.4 Lge/100 km, which was 15-25% ahead of conventional powertrains.

Figure 2 • Average new LDV fuel consumption per km by vehicle segment and powertrain, 2005-15

Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

The number of LDV models available increased substantially between 2005 and 2015, implying a diversifying market (Figure 3, left). The average weight and footprint of new LDVs sold in France was nearly constant between 2005 and 2015, and was accompanied with clear improvement in specific fuel consumption. Compared with the results of 2013 (IEA, 2016a), the 2015 vehicle models (blue and green dots in the figures below) have shifted further downwards, signifying continued improvements in average fuel economy (Figure 3).

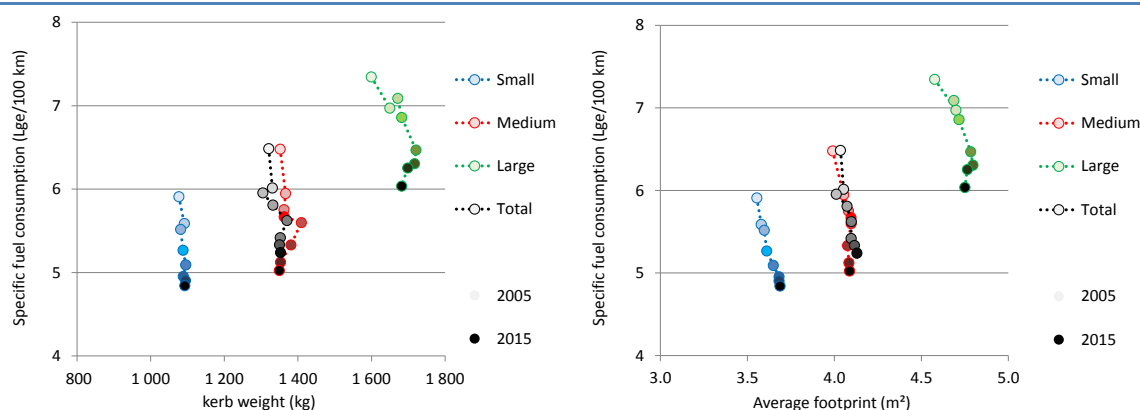
Figure 3 • Fuel consumption per km of new LDVs plotted against vehicle weight and footprint, France, 2005 and 2015

Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

Plotting average fuel economy against average weight shows a clear downward trend across all vehicle segments, even if the average weight of large LDVs increased until 2011, and then fell again between 2012 and 2015. These results highlight the impact of EU fuel economy standards coming into effect in 2009 and national fuel economy policies on vehicle taxes, favouring vehicles with lower fuel consumption per km. Nevertheless, average fuel economy improvement slowed in 2014 and 2015. This is consistent with the fact that France reached the European 2015 target on specific CO₂ emissions in advance, and so fuel economy standards are no longer a binding constraint on automakers.

The average footprint of all vehicle segments increased only marginally, while average fuel consumption improved (Figure 4, right).

Figure 4 • Average new LDV fuel consumption per km by segment plotted against vehicle weight and footprint, France, 2005-15



Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

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