

# Key Solutions CO<sub>2</sub> Assessment

CO<sub>2</sub> emissions from company cars across Europe's major markets between 2008 and 2012



**Key Solutions  
Thought Leadership**



GE imagination at work

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# Introduction and key findings

The CO<sub>2</sub> performance of passenger cars is at the centre of the recent evolution of the European automotive sector, both because of the legislative actions taken by the European Union, and for its importance within the car taxation policies of each member state.

Within the fleet sector, CO<sub>2</sub> performance assumes an even greater importance for the potential financial benefits and for the role that a focus on CO<sub>2</sub> reduction can play in a company's Corporate Social Responsibility (CSR) strategy.

From a financial perspective, given the direct correlation between CO<sub>2</sub> emissions and fuel consumption, lowering the carbon footprint of a fleet means reducing the total fuel bill and taking advantage of the tax benefits available. Today, fuel cost represents 26% of a company fleet car's Total Cost of Ownership - when our previous European CO<sub>2</sub> Assessment was published in 2011, the correspondent value was 21%<sup>1</sup>.

From a CSR perspective, offering "greener" company cars is a tangible action towards a more sustainable mobility that can have a role in motivating and retaining staff within a well-structured Company Social Responsibility strategy.

Reducing CO<sub>2</sub> emissions is therefore at the top of each fleet manager's agenda and companies

cannot afford to overlook a rigorous CO<sub>2</sub>-capping strategy for their fleet.

This report, produced by GE Capital's Key Solutions consultancy team, analyses the reduction in CO<sub>2</sub> emissions from new company cars in 11 European countries<sup>2</sup> between 2008 and 2012 focusing on:

- CO<sub>2</sub> emissions from new fleet cars;
- The CO<sub>2</sub> reduction achieved within the fleet industry and the performance of each country;
- The savings opportunities resulting from reduced fuel consumption

Based on data collected across GE Capital EMEA's pan-European fleet<sup>3</sup>, the Key Solutions team has calculated that on average **new company cars leased in 2012 produced 15.2% less CO<sub>2</sub> than in 2008.**

As companies take, in most cases, at least three years to fully renew their fleets through the continuous replacement of old cars with newer models, our analysis focussed on a three year period - from the beginning of 2010 and the end of 2012 - and on the cumulative CO<sub>2</sub> reduction<sup>4</sup> the European fleet sector realized thanks to the improvements achieved through the new cars leased.

<sup>1</sup> Source: GE Capital, Key Solutions consultancy team.

<sup>2</sup> Belgium, France, Germany, Italy, the Netherlands, Luxembourg, Portugal, Sweden, Spain and the UK.

<sup>3</sup> GE Capital EMEA manages and services about 200,000 cars across 11 European countries.

<sup>4</sup> The cumulative CO<sub>2</sub> reduction quantifies the amount of additional CO<sub>2</sub> that would have been produced in the 2010-2012 period if there had been no improvement in the overall industry performance after 2009. See the methodology notes at the end of this report for more details.

*We estimate that the cumulative reduction achieved between 2010 and 2012 is in excess of 13,143,000 tonnes, which is more than the CO<sub>2</sub> produced by a coal-fired power plant over three years.*

We estimate that **the cumulative reduction achieved between 2010 and 2012 is in excess of 13,143,000 tonnes**, which is more than the CO<sub>2</sub> produced by a coal-fired power plant over three years<sup>5</sup>.

This reduction in CO<sub>2</sub> emissions is reflective of the improved fuel efficiency of new vehicles as well as the increased focus on “greener” car policies. We estimate that if the average fleet performance had remained still at 2009 levels, **the fleet sector would have incurred in an additional fuel cost of more than 6.2 billion Euros between 2010 and 2012<sup>6</sup>**.

The report also includes a brief description of the major factors contributing to the reduction of CO<sub>2</sub> from passenger cars and highlights the key actions fleet managers shall take to reduce the carbon footprint and the fuel consumption of their fleets.

<sup>5</sup> More precisely, it is equivalent to the CO<sub>2</sub> produced by 3.38 coal-fired power plants in one year, based on the CO<sub>2</sub> conversion information made available by the US Environment Protection Agency (EPA.gov)

<sup>6</sup> This estimate quantifies the additional fuel cost the whole fleet industry would have faced if there had been no improvement in the overall industry performance after 2009. The estimate considers monthly data on the fuel prices in the 2010-2012 period across 11 markets. These data are periodically collected by GE Capital, Fleet Services from a variety of local and national sources.

# European overview

## Reduction of CO<sub>2</sub> emissions from new company cars

In the eleven European markets considered, our analysis reveals that over the five year period between the beginning of 2008 and the end of 2012, emissions were reduced by about 15.2%<sup>7</sup>, with the average car emission falling by about 23gCO<sub>2</sub>/ Km (from 151.9 gCO<sub>2</sub>/km in 2008 to 128.8 gCO<sub>2</sub>/km in 2012).

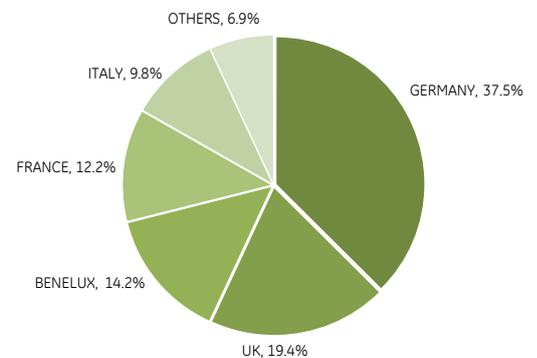
The downward trend has been constant over the five years considered, with the year-on-year reduction ranging between 3.53% (2009) and 5.07% (2011).

By projecting the CO<sub>2</sub> performance measured onto the overall fleet market (in order to represent all new company cars leased across all the markets considered) the findings reveal that the new cars leased in 2012 produced, in one year, 2,360,758 tonnes of CO<sub>2</sub> less than the 2009 models they most likely replaced<sup>8</sup>.

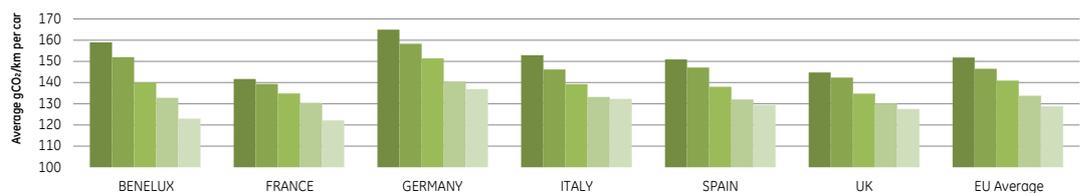
## Cumulative reduction of CO<sub>2</sub> emissions in the 2010-2012 period

Considering a three year timeframe as the period it takes for a company fleet to renew itself<sup>9</sup> through the continuous replacement of old vehicles with new models, the study reveals that the cumulative CO<sub>2</sub> emissions avoided between the beginning of

### Cumulative CO<sub>2</sub> reduction (2010-2012) by country, as a percentage



## CO<sub>2</sub> emissions from new installs\*



\*Based on Key Solutions data on the performance of the installed based managed by GE Capital, Fleet Services

2008 g CO<sub>2</sub>/Km

2009 g CO<sub>2</sub>/Km

2010 g CO<sub>2</sub>/Km

2011 g CO<sub>2</sub>/Km

2012 g CO<sub>2</sub>/Km

<sup>7</sup> This number was calculated using the average number of new installs and the overall European average mileage of each new car across the years considered. The averages were used so as to isolate the changes in CO<sub>2</sub> emissions and to negate the impact the financial crisis had on the industry. If averages had not been used, the reduction in new company cars' CO<sub>2</sub> would be much higher in those markets in some years, due in large part to the financial crisis.

<sup>8</sup> Considering a 36 month lease contract.

<sup>9</sup> Considering a 36 month lease contract.

## New cars leased in 2012 produced, in one year, about 2,360,000 tonnes of CO<sub>2</sub> less than the 2009 models they most likely replaced

2010 and the end of 2012 by the European fleet sector amount to about 13,143,000 metric tonnes. That figure is equivalent to the yearly electricity consumption of 1,699,694 houses or to the yearly CO<sub>2</sub> emission from 3.38 coal-fired power plants in one year<sup>10</sup>.

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### Cumulative CO<sub>2</sub> reduction (2010-2012) by country<sup>11</sup>

#### GERMANY: 4,930,916 TONNES

Equivalent to 1.27 coal-fired power plants in one year

#### UNITED KINGDOM: 2,547,856 TONNES

Equivalent to 5,925,246 barrels of oil

#### BENELUX: 1,861,074 TONNES

Equivalent to CO<sub>2</sub> absorbed by 1,525,471 acres of forest in one year

#### FRANCE: 1,606,004 TONNES

Equivalent to the yearly electricity consumption of 240,420 houses

#### ITALY: 1,292,686 TONNES

Equivalent to 5,554 railcars of coal

### The economic value of greener fleets

The constant reduction in CO<sub>2</sub> emissions witnessed over the years is reflective of the improved fuel efficiency of new vehicles as well as the increased focus on “greener” car policies. In simple terms, CO<sub>2</sub> reduction and reduced fuel consumption are the two sides of a same coin.

We estimate that if the fuel consumption from company cars had remained still at the 2009 levels, the total fuel bill across all markets considered would have been higher by at least 6.2 billion Euros between 2010 and 2012. Germany being the largest company car market in Europe accounts for over 2.2 billion euro of avoided fuel cost, followed by the UK with 1.3 billion Euros.

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### Avoided fuel costs in billion Euros (1/2010 to 12/2012)

GERMANY	2.27
UNITED KINGDOM	1.31
BENELUX	0.88
FRANCE	0.74
ITALY	0.63
SPAIN	0.21
OTHERS	0.20

<sup>10</sup> Based on the CO<sub>2</sub> conversion information made available by the US Environment Protection Agency (EPA.gov)

<sup>11</sup> All conversions based on the CO<sub>2</sub> conversion information made available by the US Environment Protection Agency (EPA.gov)

# CO<sub>2</sub> performance by country

## CO<sub>2</sub> performance by country between 2008 and 2012

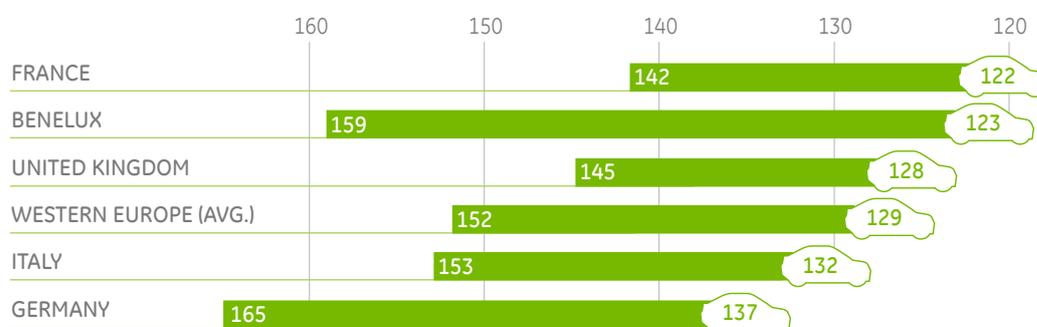
In 2012 the average company car across Europe produced 128.78 grams of CO<sub>2</sub> per kilometre, marking a reduction of 15.2% compared to the 2008 emissions. While all markets considered in this study achieved a substantial reduction of their emissions, the level of improvement varied from country to country with some markets obtaining results well above the European average: notably, the Benelux region achieved the highest reduction (22.64%), much above the second-best performance obtained in Germany (16.96%).

## Benelux (-22.64% since 2008): An outstanding improvement

The Benelux region has achieved a remarkable reduction in CO<sub>2</sub> emissions, cutting the average carbon output by 36 grams per car per Km. While in 2008 the Benelux had one of the highest emissions of carbon dioxide (159 g/Km), nowadays its performance is among the best (123 g/Km) and second only to the performance achieved in France (122.17 g/Km).

This massive improvement has been driven mainly by regulation and tax incentives. The Netherlands were among the first countries to create a company car taxation system, both for employers and employees, that shifted the focus from power

## Evolution of CO<sub>2</sub> emissions from new installs between 2008 and 2012



*In 2012 the average company car across Europe produced 128.78 grams of CO<sub>2</sub> per kilometre, marking a reduction of 15.2% compared to the average new company car in 2008.*

output and asset prices to CO<sub>2</sub> emission levels. Belgium adopted a similar solution only recently but corporations had been expecting this regulation for some time. Moreover, several multinationals operate their Belgian and Dutch fleets in synergy, as their “Benelux fleet”, and therefore the regulation framework in existence in the Netherlands influenced the Belgian company car market as well.

**Germany (-16.96% since 2008):  
Great results and greater potential**

Between 2008 and 2012, German fleets reduced their CO<sub>2</sub> emissions by 27.97 grams per car per kilometre. In 2008 company cars in Germany showed the highest average emission of CO<sub>2</sub> and this was still true in 2012, although the gap with the other markets has substantially narrowed.

Historically, German drivers have been more likely to choose bigger engines than drivers in other countries. In recent years, however, their focus has partly shifted from engine size to power output, and they are increasingly choosing vehicles that are more efficient from a CO<sub>2</sub> perspective. At the same time, German companies are increasingly willing to adopt CO<sub>2</sub>-capping policies, introducing some limits to the car selection available to their employees. Thanks to a remarkable improvement in its CO<sub>2</sub> performance is responsible for about 37.5% of the CO<sub>2</sub> savings achieved by the European fleet sector between 2010 and 2012.

With over one million company cars leased every year, Germany is the largest fleet market in Europe. As German fleets reduce the gap with other European countries, the potential for further abating CO<sub>2</sub> in the coming years is great.

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**Average CO<sub>2</sub> reduction, new installs  
(2008 to 2012)**



**Spain (-14.27% since 2008):  
Increased focus in recent years**

Between 2008 and 2012, company cars in Spain reduced their CO<sub>2</sub> emissions by 14.27% and with an average emission of 129.34 grams of CO<sub>2</sub> per kilometre are very close the European average (128.27 g/Km). In real terms, over the last three years, Spanish fleets saved about 505,771 tonnes of CO<sub>2</sub>.

In 2011, Spain introduced registration taxes based on CO<sub>2</sub> emission levels. All cars with CO<sub>2</sub> emissions below 120 g per Km were exempted, while vehicles producing more than 200 g of CO<sub>2</sub> per Km were taxed at 14.75% of the asset cost. Naturally, these measures pushed Spanish companies to rethink their car policies and increasingly focus on fuel efficiency.

### **France (-13.77% since 2008): Still leading the way**

While the overall reduction in CO<sub>2</sub> emissions achieved in France is not the highest percentage-wise, French fleets are in fact leading the way when it comes to CO<sub>2</sub> emissions.

In 2012, company cars in France produced the lowest carbon emission in Europe with 122.17 grams of CO<sub>2</sub> produced per kilometre, confirming the leading position they already held in 2008, when the average company car in France produced about 142 grams of CO<sub>2</sub> per kilometre.

Companies in France adopted rigorous CO<sub>2</sub>-capping policies earlier than in other European countries, as a result of a "bonus malus" taxation system introduced by the French government in 2008, which created a strong incentive for choosing cars with low emissions.<sup>12</sup>

Moreover, French firms tend to choose smaller cars (with smaller engines) than firms in the Northern European countries.

With other countries adopting stricter regulations and focusing more on CO<sub>2</sub>-capping strategies, the gap between France and the other markets is however progressively narrowing.

### **Italy (-13.47% since 2008): Performance within average but with an increasingly diverse fuel mix**

Between 2008 and 2012 company cars in Italy cut their CO<sub>2</sub> emission by 20.60 grams per Kilometre (from 152.90 g/Km to 132.30 g/Km) achieving a reduction of 13.47%, only two percentage points below the average reduction seen across Europe (15.20%).

The CO<sub>2</sub> performance of the Italian fleets is well within the European average, however the penetration of alternative fuels makes the Italian automotive market stand apart, and could well become a new trend in the Italian fleet sector: 9.17% of all cars registered in Italy in 2012 run on LPG and 3.81% on natural gas<sup>13</sup>, marking a substantial increase compared to the previous year, when the correspondent percentages were 3.22% and 2.18%. As LPG and natural gas produce less carbon dioxide than petrol and diesel, if the

<sup>12</sup> In France the company tax is based on a "bonus malus" system and the road tax is the TVS.

<sup>13</sup> Source: unrae.it

## *New cars leased in 2012 produced, in one year, about 2,360,000 tonnes of CO<sub>2</sub> less than the 2009 models they most likely replaced*

shift towards alternative fuels continues and becomes more pronounced within the fleet sector, it could allow Italian fleets to drastically lower their emissions in the coming years.

Similarly to France, UK companies adopted green car policies relatively early and remained focussed on CO<sub>2</sub>-capping strategies in recent years, although the gap between the UK and other European countries has progressively narrowed.

### **United Kingdom (-11.92%): Consistently better than the European average**

British car fleets reduced their CO<sub>2</sub> emissions by 17.26 grams per kilometre between 2008 and 2012. While this reduction is lower than other European markets, company cars in the UK are in fact remarkably CO<sub>2</sub>-efficient: UK fleets were the second “greenest” in 2008 (with an average of 144.78 grams of CO<sub>2</sub> per car per kilometre) and were still among the most efficient in 2012 (127.52 g/Km).

The average emissions produced by British fleets were consistently lower, in absolute terms, than the European average in all five years considered in this study.

# Contributing factors to CO<sub>2</sub> reduction in new cars emissions

Driven by technological advances, company car environmental policies, CO<sub>2</sub>-related taxation and changes in driver behaviour, average emissions have reduced significantly in the industry in recent years and are on course to meet the targets set by the European Union.

## a. European regulations

The European Union is leading the way in greenhouse gases (GHG) emission reduction. Ambitious environmental targets are having a direct impact on the transport and automotive industries and are transforming the environmental policies of all EU nations. By 2015, CO<sub>2</sub> emissions from the 'average new car fleet' sold by each manufacturer within the EU must not exceed 130 g/km. Moreover, all passenger cars registered within the EU will have to comply with a CO<sub>2</sub> emissions limit of 95 g/Km CO<sub>2</sub> by 2020.

The European Commission has recently started a consultation to define a new 2030 framework for EU climate change and energy policies. While the consultation has a broader focus than the automotive sector, it will shape the green agenda for the next decade and will likely lead to new regulations and new CO<sub>2</sub> reduction targets.

## b. National fiscal policies and 'scrappage schemes'

With European Union legislation setting strict CO<sub>2</sub> emission reduction targets, governments have responded with wide-ranging measures to increase CO<sub>2</sub> emission taxation on passenger cars. Tax bands and thresholds are changed periodically, to incentivize the adoption of newer models. For instance the 2013 UK Budget introduces a new tax band for company cars emitting less than 50 grams

Countries	Registration tax linked to CO <sub>2</sub> ?	Annual road tax linked to CO <sub>2</sub> ?	Company taxes linked to CO <sub>2</sub> ?	BIK linked to CO <sub>2</sub> ? (Benefit in Kind)	Others
Belgium	✗	✗	✓	✓	✓
France	✓	✓	✓	✗	✓
Germany	✗	✓	✗	✗	✓
Italy	✗	✗	✗	✗	✓
Netherlands	✓	✓	✗	✓	✓
Portugal	✓	✓	✗	✗	✓
Spain	✓	✗	✗	✗	✓
UK	✗	✓	✓	✓	✓

## *Already in 2011, most carmakers were already below the target levels of CO<sub>2</sub> emissions expected for 2012, according to the European Environment Agency*

of CO<sub>2</sub> per kilometre and for those between 51 and 75 g CO<sub>2</sub> per km, which will be taxed at 5% and 9% respectively in 2015-16 and then at 7% and 11% in 2016-17.

Government subsidies for new cars (so-called “scrapage schemes”) also played a role in reducing sales average CO<sub>2</sub>/Km by shifting demand to less expensive cars (which are typically smaller and pollute less).

### **c. Technological advances**

Car manufacturers have responded to the challenge posed by the strict EU targets by launching new and more fuel efficient vehicles. Already in 2011, most carmakers were already below the target levels expected for 2012. This was the situation for 47 carmakers, responsible for 95% of the new cars registered in the EU in 2011, according to a report from the European Environment Agency (EEA).<sup>14</sup>

Moreover, 18 of the 20 largest manufacturers in 2011, were within 2012 targets, with the remaining two very close. Five of these manufacturers are on track to meeting their 2015 target too.<sup>15</sup>

### **d. ‘Greener’ company car policies**

As a result of financial incentives and growing corporate social responsibility, fleet consultancies are increasingly recommending customers on CO<sub>2</sub>-capped car policies.

### **e. Raising fuel prices**

Fuel price has been growing steadily since the first quarter of 2009. In the 2011-2012 period alone, diesel price increased by about 21%<sup>16</sup>. While it is not possible to forecast future trends with a reasonable degree of certainty, currently there are no elements that would lead to expect any reduction in fuel price in the short term. As a result, fleet managers are focusing more and more on controlling fuel costs by choosing more efficient vehicles, with the obvious benefit of lowering their CO<sub>2</sub> emissions at the same time.

### **f. Increased focus on Corporate Social Responsibility**

Corporate Social Responsibility is increasingly prominent in the corporate agenda as a way to motivate and retain employees, especially as the new generations (‘millennials’ or ‘generation y’) progressively enter the workforce.

For instance, a recent research conducted by Cone Millennial Cause group, that 80% of a sample of 1,800 13-25 year olds wanted to work for a company that cares about how it impacts and contributes to society, while more than half said they would refuse to work for an irresponsible corporation.<sup>17</sup>

<sup>14</sup> Source: European Environment Agency, CO<sub>2</sub> emissions performance of car manufacturers in 2011. More details available at <http://www.eea.europa.eu/highlights/most-car-manufacturers-on-track>.

<sup>15</sup> Source: European Environment Agency, CO<sub>2</sub> emissions performance of car manufacturers in 2011. More details available at <http://www.eea.europa.eu/highlights/most-car-manufacturers-on-track>.

<sup>16</sup> The average diesel price across Belgium, France, Germany, Italy, the Netherlands, Portugal, Sweden, Spain, Switzerland and the United Kingdom increased by 21% between the beginning of 2011 and the end of 2012. Price data is regularly collected by GE Capital, Fleet Services from a variety of local and national sources.

<sup>17</sup> Source Forbes: <http://www.forbes.com/sites/jeannemeister/2012/06/07/corporate-social-responsibility-a-lever-for-employee-attraction-engagement/>

# The importance of choosing the right company car

The environmental and economic benefits of capping CO<sub>2</sub> emissions are evident when considering the millions of company cars used across Europe. However, the environmental impact a single car or one company fleet can make, and the related economic benefit, are often underestimated and overlooked.

A comparison of the performance of two similar vehicles that were available on the market in 2010 can effectively illustrate and quantify the possible benefit deriving from a CO<sub>2</sub>-driven car choice. The two vehicles considered in this section (vehicles A and B) are similarly priced, belong to the same segment (medium station wagons for the mass market), have a similar engine and a similar power output (between 110hp and 130hp). Their average fuel consumption differs by just 0.4L/100Km (4.9L

/100Km vs. 5.3L /100Km). In 2010, these two models were perceived as possible alternatives by the driver base.

## a. Yearly fuel consumption and CO<sub>2</sub> emissions

Considering a travelling distance of 40,000 Km every year, in three years both vehicles would run a distance of 120,000 Km. For vehicle A, such distance requires 5,880 litres of fuel, while vehicle B would need 480 more litres of diesel to cover the same distance, totalling 6,360 litres over the same period. Should the car be used for one more year, the gap between vehicles A and B would widen, with vehicle B using 640 litres more than vehicle A by the end of the fourth year.

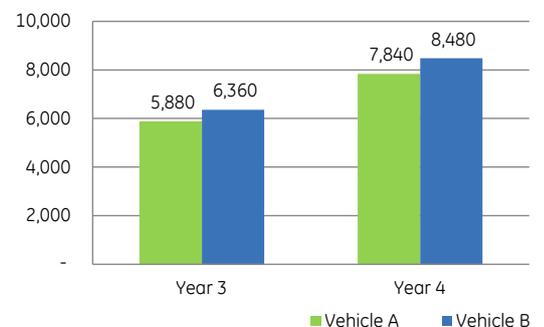
### Vehicle A

TYPE: STATION WAGON  
ENGINE: 2.0 DIESEL  
ANNUAL LEASE RATE: €6,880  
AVG. FUEL CONSUMPTION: 4.9L/100KM

### Vehicle B

TYPE: STATION WAGON  
ENGINE: 2.0 DIESEL  
ANNUAL LEASE RATE: €6,891  
AVG. FUEL CONSUMPTION: 5.3L/100KM

### Total fuel consumption (l)

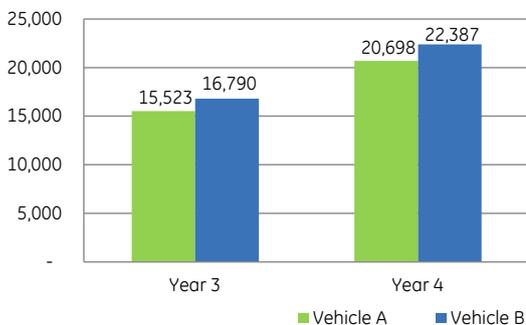


The same is true for CO<sub>2</sub> emissions: by the end of the third year vehicle A would have saved over a metric tonne (1,267.2 Kg) compared to vehicle B and by the end of the fourth year the difference would rise to 1,689.6 Kg, which is equivalent to the CO<sub>2</sub> emissions of 3.93 barrels of crude oil.<sup>18</sup>

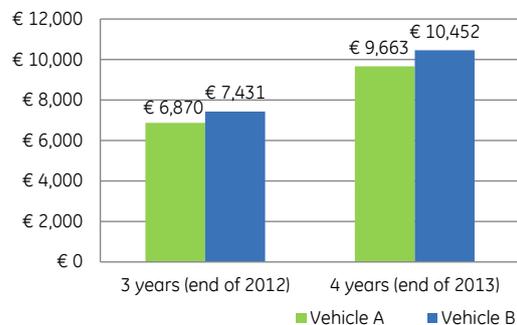
### b. Total fuel cost per car

Considering the rise in the average diesel price across Europe, if both vehicles were on the road at the beginning of 2010, by the end of that year vehicle A would have saved the owner €163,<sup>19</sup> and the yearly saving would have increased every year

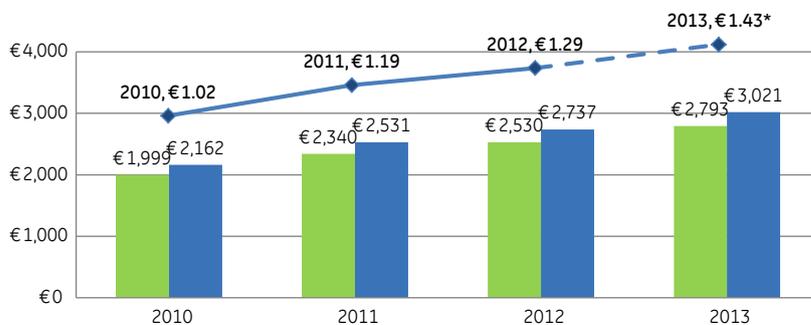
#### Total CO<sub>2</sub> emissions (Kg)



#### Total fuel cost (€)



#### Yearly fuel cost per car and average fuel price (2010 - 2013)



<sup>18</sup> Conversion based on the CO<sub>2</sub> conversion calculator made available by the US Environment Protection Agency (EPA.gov).

<sup>19</sup> All fuel savings estimates in this chapter are based on the average diesel price across Belgium, France, Germany, Italy, the Netherlands, Portugal, Sweden, Spain, Switzerland and the United Kingdom. Price data is regularly collected by GE Capital, Fleet Services from a variety of local and national sources.

*In the scenario considered, each percentage point of efficiency is worth up to €105 in fuel cost and 225 Kg of CO<sub>2</sub> over a period of four years.*

as a result of the rising trend in fuel prices. In 2012 the saving would have been €207 and, assuming the average diesel price in 2013 will be €1.43 per litre, the expected 2013 saving is about €228.

Overall, in the three years until the end of 2012, vehicle A would have saved €561 worth of fuel compared to vehicle B, in the scenario considered. Should the two vehicles be used until the end of 2013, the expected savings from using vehicle A could amount to €789.

### **c. What it means for a larger fleet**

While vehicle A is just 7.5% more efficient than vehicle B, over four years such difference can amount to a saving of €789 worth of fuel and 1,689.6 Kg less CO<sub>2</sub> released in the environment. In other words, in the scenario considered, each percentage point of efficiency is worth up to €105 in fuel cost and 225 Kg of CO<sub>2</sub> over a period of four years.

If we were considering 200 cars, the possible environmental advantages and economic savings would be substantial.:

- In the three years to the end of 2012, a 200 car fleet adopting vehicle A (Fleet A) would have saved €112,160 worth of fuel over an equivalent fleet adopting vehicle B (Fleet B). Over the same period the total CO<sub>2</sub> emission from Fleet A would be 253 tonnes less than the total emission from Fleet B, and such difference is equivalent to 589.4 barrels of oil.
- In the four years scenario, the possible fuel savings Fleet A could achieve compared to Fleet B could amount to €157,760 by the end of 2013. In the same period, the CO<sub>2</sub> savings would amount to 828.4 metric tonnes, which is equivalent to the CO<sub>2</sub> absorbed in one year by 277 acres of pine forest.

# Enhancing your fleet's green performance

In light of the environmental and economic benefits deriving from a 'greener' fleet, every fleet manager should consider taking the following actions:

## 1. Analyse your current emissions

A detailed analysis of the current CO<sub>2</sub> emissions and fuel consumption by country and by business unit will identify the areas that need to be prioritised in order to get the best improvement.

## 2. Adopt a CO<sub>2</sub>-capped car policy

Implement a CO<sub>2</sub>-capped car policy reviewing the choice of company cars and focusing on the most efficient models available on the market (i.e. 'greenest performance', fuel type, duration). The car policy should find the best possible balance between cost efficiency, green performance and a high driver satisfaction.

## 3. Revisit the car policy every year

CO<sub>2</sub>-capped car policies should be reviewed regularly, both in light of the results achieved and to take into account new and more fuel-efficient cars introduced by car makers.

## 4. Train employees to improve their driving style

A critical factor to optimise the usage of company cars is to influence the driver behaviour. It is estimated that an additional 5 to 10% benefit could be achieved through eco-driving programs for employees.

<sup>10</sup> Based on the CO<sub>2</sub> conversion information made available by the US Environment Protection Agency (EPA.gov)

<sup>11</sup> All conversions based on the CO<sub>2</sub> conversion information made available by the US Environment Protection Agency (EPA.gov)

# About GE Capital's Fleet Services division

One of the largest fleet services providers in the world, GE Capital offers unique financing solutions, exclusive consultancy services and advanced management tools that will transform your fleet. GE Capital finances and manages over 1.5 million cars in Europe, Americas and Asia. As a top European provider for multinational companies, we serve over 80 large international fleets across 12 European countries.

For more information please visit our European website at [www.gecapital.eu/fleet](http://www.gecapital.eu/fleet)

## How we can help make your fleet greener

Below are just some of the exclusive services and tools we provide to our customers.

### Setting the right strategy

GE Capital's Key Solutions consultancy team can help customers shape a comprehensive green strategy that makes financial sense for their business, finding the best balance between lowering CO<sub>2</sub> emissions, reducing costs, increasing driver satisfaction and enhancing the overall fleet efficiency.

More on [www.gecapital.eu/keysolutions](http://www.gecapital.eu/keysolutions)

### Eco-driving training for your employees

GE Capital's recently launched Clear Drive training programme helps drivers improve their driving style by learning driving techniques that reduce the CO<sub>2</sub> emissions of their cars. Clear Drive has been designed to improve driver behaviour through online tutorials, seasonal emails with useful eco tips as well as monitoring capabilities to track fuel consumption.

More on [www.gecleardrive.com](http://www.gecleardrive.com)

## Monitoring your fleet's green performance

With full access to iManage, a powerful and easy-to-use fleet management tool, customers can monitor costs and CO<sub>2</sub> performance, make year-on-year comparisons and benchmark different countries or business units against their targets. Data on CO<sub>2</sub> emissions can be analysed in detail and broken down by make, model, fuel type and many other criteria.

More on [www.gecapital.eu/imanage](http://www.gecapital.eu/imanage)

## Implementing your green car policy

With iQuote fleet managers can implement car policies that take into account their CO<sub>2</sub> emission targets and make sure no new vehicles are ordered outside the CO<sub>2</sub> limits they have set for across different countries or business units.

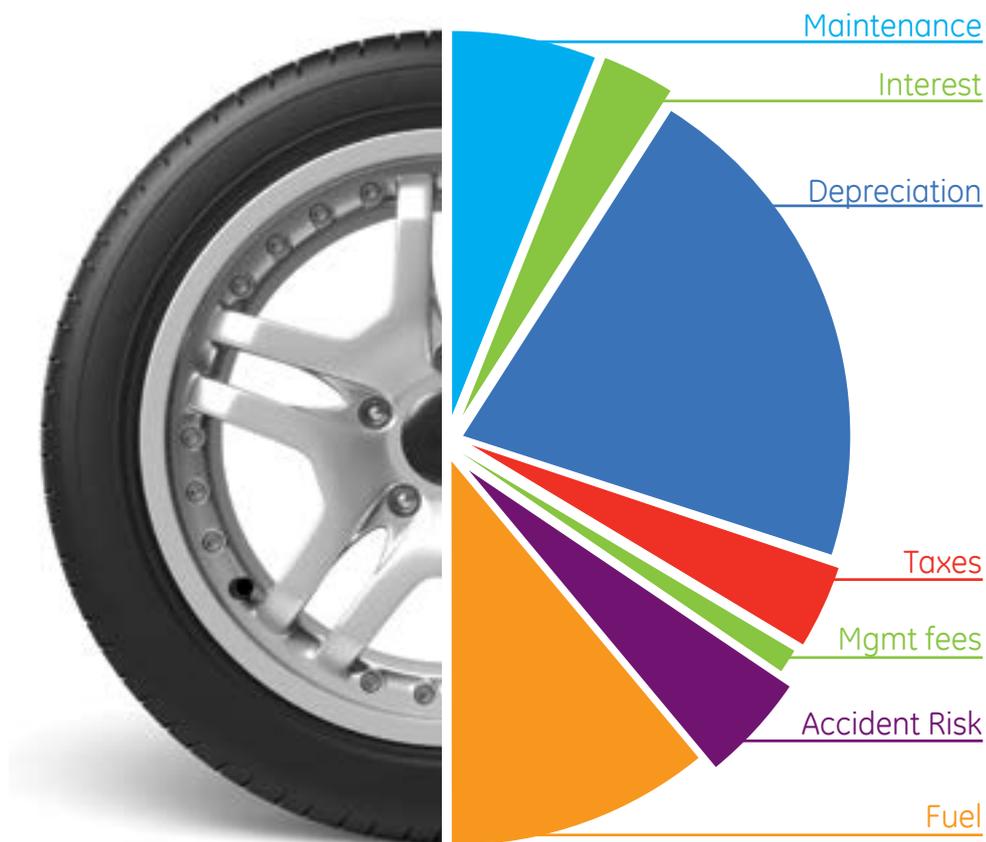
More on [www.gecapital.eu/iquote](http://www.gecapital.eu/iquote)

# OUR CUSTOMERS SAVED MORE THAN € 80,000,000 OFF THEIR FLEET COSTS

Over the last decade, GE Capital's Key Solutions experts performed more than 11,000 studies, analysing the performance of over two million cars across 12 European countries. In the last five years alone, our consultants realised more than € 80 million of savings for our European customers, and identified a further € 310 million of potential saving opportunities.

Ask us what we can do for your fleet.

[www.gecapital.eu/keysolutions](http://www.gecapital.eu/keysolutions)



GE imagination at work



**Key Solutions**

Over 10 years delivering fleet savings and efficiency across Europe

# Notes on the methodology used in this report

## CO<sub>2</sub> reduction and savings

CO<sub>2</sub> reductions are estimated by comparing the average performance of all new cars installed in a certain year with the average performance of all new cars installed three years earlier. For instance, the savings achieved by new fleet cars installed in 2011 is calculated by comparing their performance with the performance of the new cars installed in 2008. This report therefore considers a 36 month lifecycle.

## Cumulative reduction and cumulative savings between 2010 and 2012

In the model used in this report, the yearly CO<sub>2</sub> reduction achieved by new cars installed after 2009 has carried over for the period these cars have been on the road. In other words, the yearly CO<sub>2</sub> reduction achieved by new cars installed in 2010 has been taken into account also for 2011 and 2012 in order to account for the fact that these cars have been in use for a period of three years and therefore their total contribution had.

	2010	2011	2012
	Total reductions or savings achieved in 2010	Total reductions or savings achieved in 2010	Total reductions or savings achieved in 2010
Total reductions or savings achieved by new vehicles installed in 2010	Yearly reduction or savings achieved by 2010 vehicles	Yearly reduction or savings achieved by 2010 vehicles	Yearly reduction or savings achieved by 2010 vehicles
Total reductions or savings achieved by new vehicles installed in 2011		Yearly reduction or savings achieved by 2011 vehicles	Yearly reduction or savings achieved by 2011 vehicles
Total reductions or savings achieved by new vehicles installed in 2012			Yearly reduction or savings achieved by 2012 vehicles
	Cumulative reductions or savings achieved across the 2010-2012 period		

This approach has been chosen in order to estimate the reduction achieved by the fleet sector over the “complete lifecycle” of a fleet, considering that each company car is on the road for at least three years. In other words, this report estimates the amount of additional CO<sub>2</sub> that would have been produced over the last three years if there had been no performance improvements after 2009.

Lease contracts often last longer than 36 months and therefore the choice of a three year lifecycle should be seen as a conservative choice. As in many cases new cars replace vehicles that are over three years old, the actual reduction is likely to be greater. For this reason, the actual reduction in CO<sub>2</sub> emissions is likely to be “in excess of” the estimated figure.

### Fuel savings and economic value of CO<sub>2</sub> reductions

The estimates of the possible fuel savings and of the economic value of CO<sub>2</sub> reduction for the fleet industry are made taking into account the chemical properties of diesel and petrol, the average penetration of both fuels in the various markets covered in the report, as well as the average fuel prices seen across these markets in the timeframe considered.

From a fuel standpoint, estimates are based on a petrol mix emitting 2.31kg of CO<sub>2</sub> per litre and a diesel mix producing 2.64kg CO<sub>2</sub> per litre. Average fuel prices are based on the fuel prices across Belgium, France, Germany, Italy, the Netherlands, Portugal, Sweden, Spain, Switzerland and the United Kingdom. Price data is regularly collected by GE Capital, Fleet Services from a variety of local and national sources.



## Key Solutions Thought Leadership

For more guides as well as case studies, tools, benchmarking and much more visit:  
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