NGVA Europe

# STATISTICAL REPORT 2017

*Natural & bio Gas Vehicle Association Europe*
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NGVA Europe is a European association that promotes the use of natural and renewable gas as a fuel in vehicles and ships. Founded in 2008, it currently comprises more than 140 members from 40 countries.

The association is a platform for industry involved in the production and distribution of vehicles and natural gas, including manufacturers of components, gas suppliers and gas distributors. It defends their interest to European decision makers to create accurate standards, fair regulations and equal market conditions. NGVA Europe creates networks with interested stakeholders to reach consensus on positions and actions that could expand the market for Natural Gas Vehicles (NGVs). It also collects, records and communicates reliable facts and significant developments in this market.


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2017-06-NGVSTAT-PP-V1

# Market **Development**

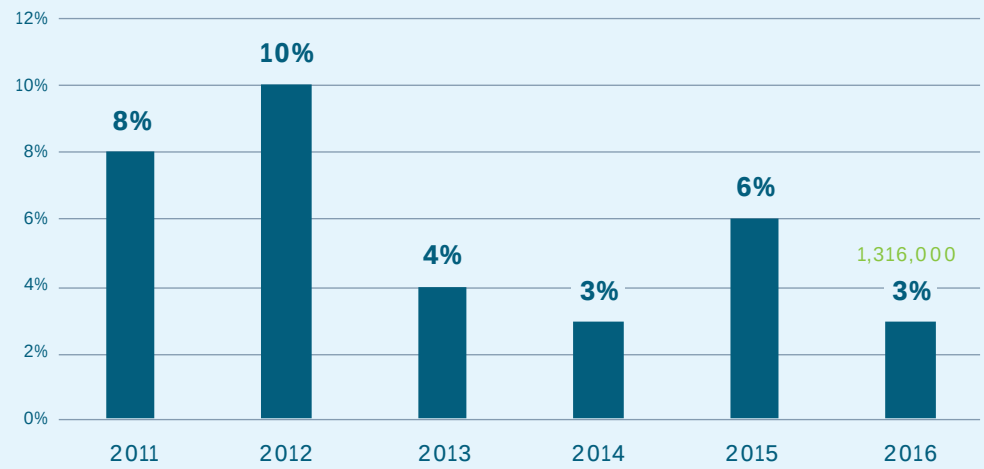
## NGV market statistical report:

## Monitoring market growth

NGVA Europe has collected statistics and data on natural gas vehicles annually since 2010. Key statistical data includes: the number of natural gas vehicles; the number of public and private refuelling stations (CNG, L-CNG and LNG) and market analysis. Also included are the annual CNG and LNG consumption rates and share of biomethane. Further information is presented in this year's first statistics publication, whereas detailed current and historical data is available to all NGVA Europe members.

The 2017 edition of the Statistical Report, **edited as a publication for the first time, is a** compilation of the data available at the end of the year 2016. The data comes via the national contact points, mainly national NGV Associations.

MARKET DEVELOPMENT NGV EU + EFTA (%)



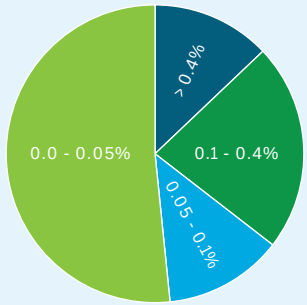

*Source: NGVA Europe Statistics 2016*

In 2016, the total number of natural gas vehicles (NGVs) on European roads amounts to 1,316,000. This is a rise of 3% market development, compared with 2015. The largest increase in market development this year is in the number of trucks at 15%.

Since 2011, our statistics have pointed to a steady increase in market share for NGVs in Europe, which is in line with initial predictions. However, in order to reach the envisaged 15 million vehicles by 2030, incentives are needed to promote NGVs and further boost market uptake.

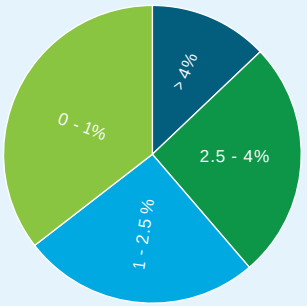
# Market Penetration

## MARKET PENETRATION NGV PASSENGER CARS EU + EFTA (%)



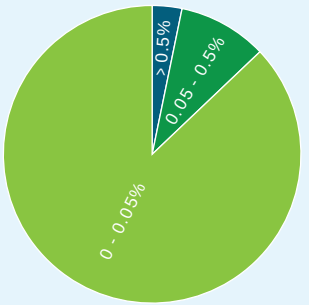

- SE, BG, IT, IS
- AT, CZ, EE, DE, HU, NL, CH
- BE, FE, LU, SI
- REST

## MARKET PENETRATION NGV BUSES EU + EFTA (%)




- CZ, NL, SE, IS
- FR, IT, LT, PT, SK, SI, ES, NO
- AT, BG, HR, EE, DE, EL, HU, LU
- REST

## MARKET PENETRATION NGV TRUCKS EU + EFTA (%)




- IS
- IT, NL, SE
- REST

*Source: NGVA Europe Statistics 2016*

Market penetration means the total number of NGVs in a sector, divided by the total amount of vehicles running on all fuels in the same country. It shows where NGVs are most established per sector (passenger cars, buses and heavy-duty vehicles).

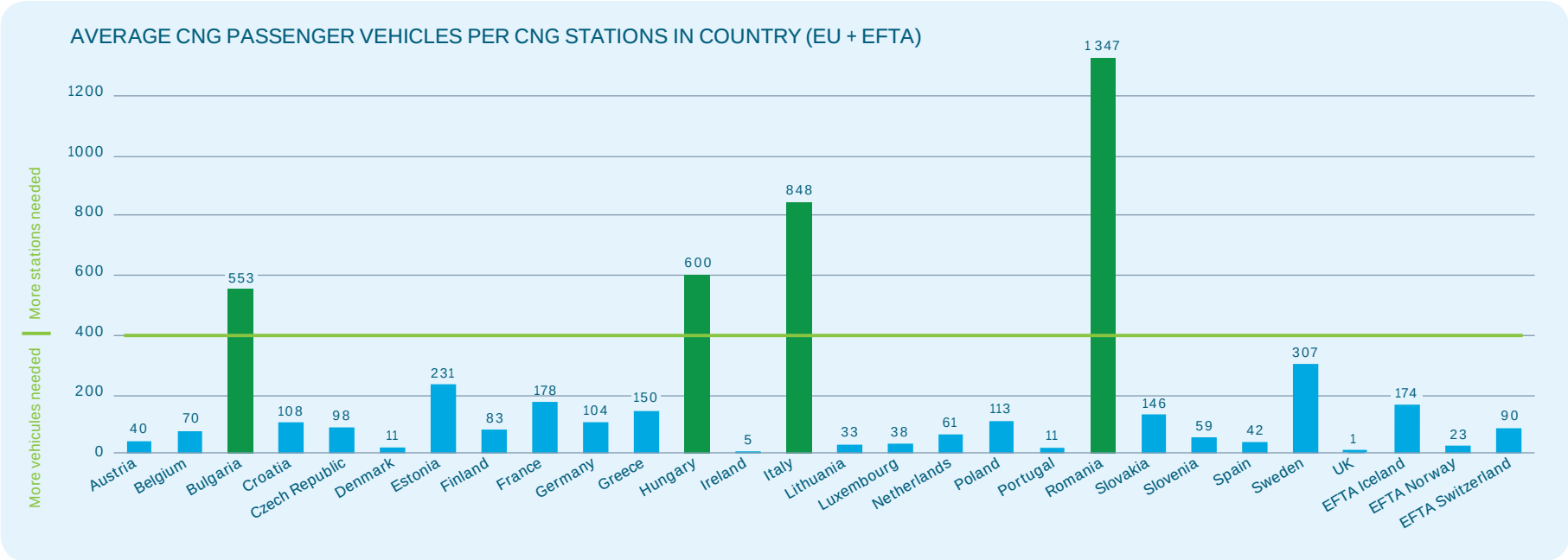
The market penetration for cars in 2016 is the highest in Sweden, Bulgaria, Italy and Iceland, with a share above 0.4%. Sweden outperforms all other countries on the bus market share with 16%, other well performing countries were Czech Republic, the Netherlands and Iceland.

For trucks, Iceland holds the highest market penetration, with more than 0.5%.It is important to note that in Iceland, despite the high penetration, the total vehicle market is very small in comparison with other EU countries. Nevertheless, considering the fact that Iceland is remotely situated country and running on 100% biomethane, the market uptake is strong.

Interestingly, Sweden, which performs best in the bus market, also has a strong heavy-duty and passenger car markets.

There is an urgent need for more trucks running on gas in all other countries to go along with the fast development of the refueling infrastructure.

# Market Opportunities




*Source: NGVA Europe Statistics 2016*

The graph above showcases the average number of natural gas passenger cars per CNG station for the country in focus. There are four countries that outperform the rest of Europe when it comes to vehicles per station - Bulgaria, Hungary, Italy and Romania. This could be interpreted as an opportunity for CNG station developers to invest in these specific markets.

On the contrary, when there are fewer vehicles per station, this suggests that the infrastructure is already developed and ready to be used. The way to develop forward would be to promote the uptake of more NGVs and therefore achieve better station utilisation.

Globally there are 100 LNG-fuelled maritime vessels currently in operation with a further 101 confirmed new builds and an additional 72 LNG-ready ships, running now on other fuels. There are 57 LNG bunkering facilities currently available.

In addition to the traditional modes of transport, specialised types of NGVs are also available. These comprise trains, forklifts, auto rickshaws and other service vehicles, as well as dedicated CNG vehicle refuelling appliances (VRAs) for homes.

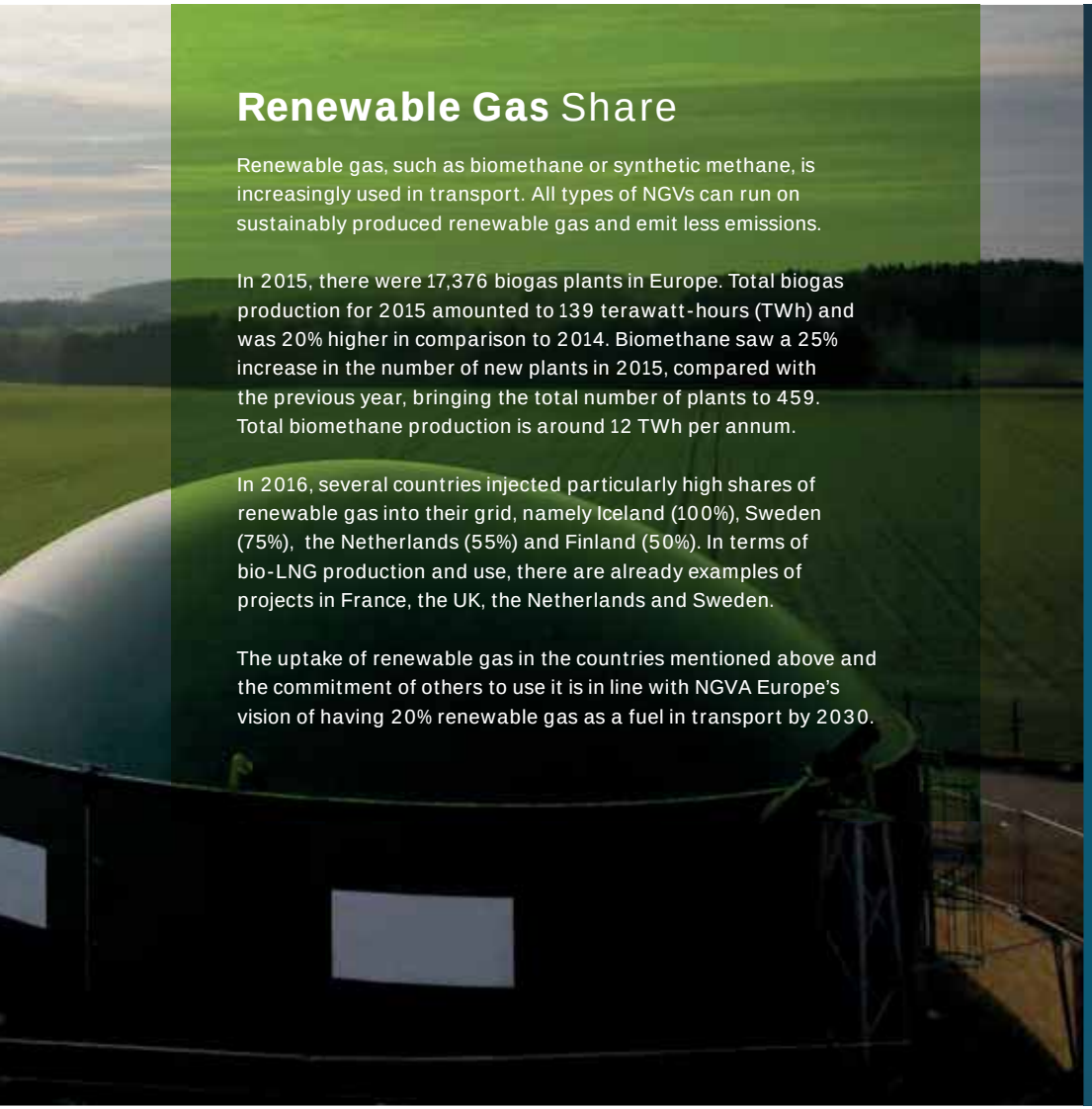
# General **Overview**

## NATURAL GAS VEHICLES & STATIONS IN EUROPE (EU+EFTA) 2016

| Country | NGV Stations | NGV Vehicles |
|---|---|---|
| Austria | 172 | 7.084 |
| Belgium | 78 | 5.365 |
| Bulgaria | 125 | 69.820 |
| Croatia | 2 | 318 |
| Cyprus | - | - |
| Czech Republic | 143 | 15.500 |
| Denmark | 15 | 327 |
| Estonia | 6 | 1.504 |
| Finland | 29 | 2.375 |
| France | 60 | 14.548 |
| Germany | 885 | 93.964 |
| Greece | 10 | 2.210 |
| Hungary | 10 | 6.314 |
| Ireland | 1 | 8 |
| Italy | 1.186 | 1.001.614 |
| Latvia | - | - |

| Country | NGV Stations | NGV Vehicles |
|---|---|---|
| Lithuania | 3 | 343 |
| Luxembourg | 7 | 306 |
| Malta | - | - |
| Netherlands | 183 | 11.020 |
| Poland | 28 | 3.600 |
| Portugal | 19 | 570 |
| Romania | 1 | 1.390 |
| Slovakia | 11 | 1.893 |
| Slovenia | 4 | 335 |
| Spain | 66 | 5.797 |
| Sweden | 173 | 54.379 |
| UK | 38 | 310 |
| EFTA Iceland | 5 | 1.236 |
| EFTA Norway | 7 | 745 |
| EFTA Switzerland | 141 | 12.912 |
| **Total EU + EFTA** | **3.408** | **1.315.787** |

*Source: NGVA Europe Statistics 2016*



## **Renewable Gas** Share

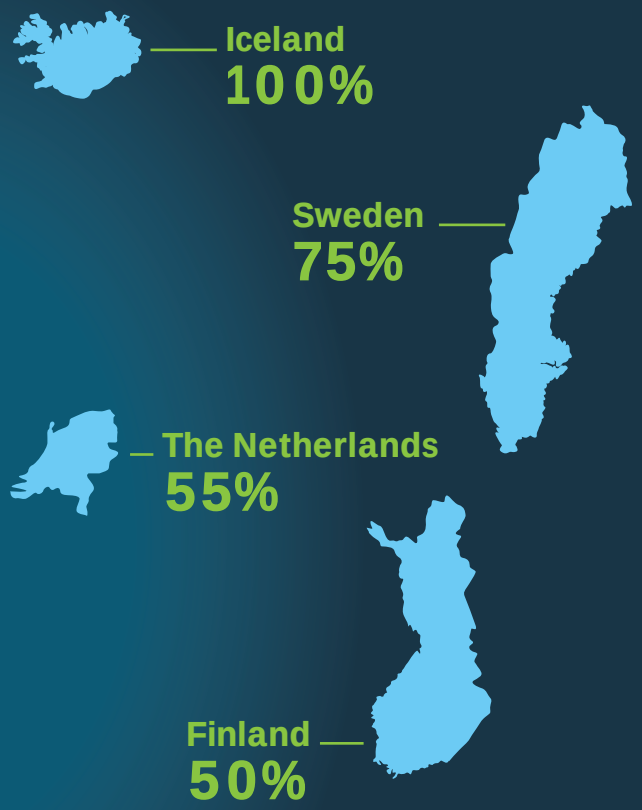
Renewable gas, such as biomethane or synthetic methane, is increasingly used in transport. All types of NGVs can run on sustainably produced renewable gas and emit less emissions.

In 2015, there were 17,376 biogas plants in Europe. Total biogas production for 2015 amounted to 139 terawatt-hours (TWh) and was 20% higher in comparison to 2014. Biomethane saw a 25% increase in the number of new plants in 2015, compared with the previous year, bringing the total number of plants to 459. Total biomethane production is around 12 TWh per annum.

In 2016, several countries injected particularly high shares of renewable gas into their grid, namely Iceland (100%), Sweden (75%), the Netherlands (55%) and Finland (50%). In terms of bio-LNG production and use, there are already examples of projects in France, the UK, the Netherlands and Sweden.

The uptake of renewable gas in the countries mentioned above and the commitment of others to use it is in line with NGVA Europe's vision of having 20% renewable gas as a fuel in transport by 2030.

## **Bio** Champions




*Source: European Biogas Association, Statistical Report 2016.*
*NGVA Europe Statistics 2016*

LNG

ALREADY

**101 LNG STATIONS**

OPERATIONAL IN THE EU + EFTA

**348% INCREASE**

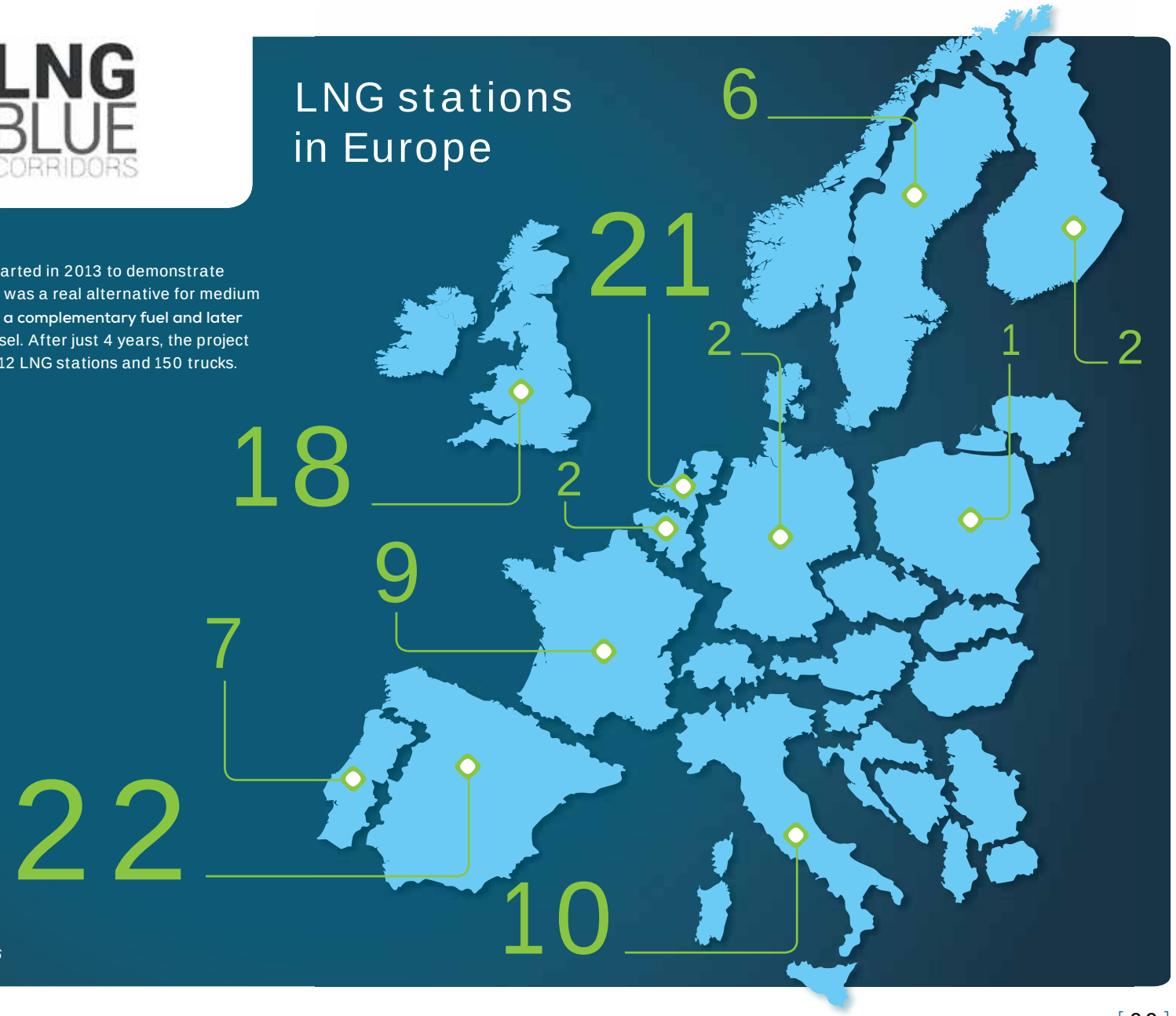
SINCE 2013

FORECAST 2030:

**400.000 LNG TRUCKS**

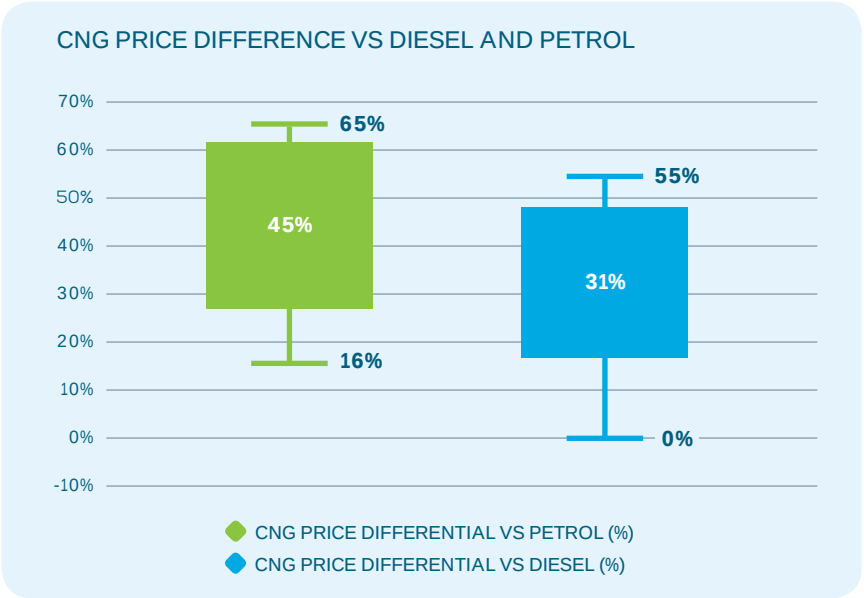
# LNG stations in Europe

The LNG Blue Corridors project started in 2013 to demonstrate that LNG as a transportation fuel was a real alternative for medium & long distance transport, first as a complementary fuel and later as an adequate substitute for diesel. After just 4 years, the project has surpassed the set goals with 12 LNG stations and 150 trucks.

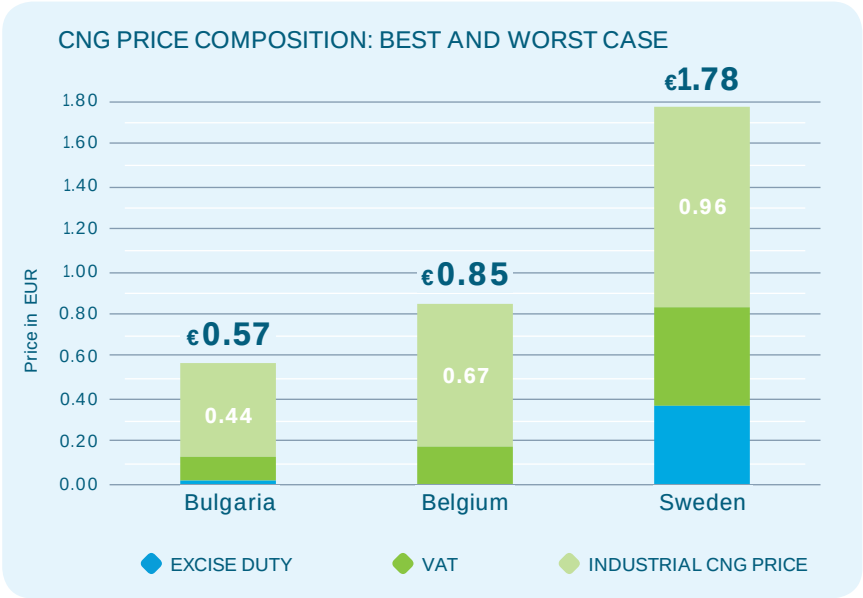



*Source: NGVA Europe Statistics 2016*

# How favourable is the **price delta on gas**?




*Source: NGVA Europe Statistics 2016*




*Source: NGVA Europe Statistics 2016*

The average price for CNG in Europe is €0.99/kg, which is 48% lower than petrol and 31% lower than diesel, making it an economic fuel for transport. Even though NGVs are, on average, more expensive to buy than conventionally-fuelled vehicle, the initial cost is offset by the lower CNG price.

In Belgium and the Czech Republic, the highest CNG price difference between petrol and diesel respectively can be found (65% and 55%), while the lowest CNG price difference for both fuels are in Sweden (16% and 0%).

The price of CNG differs throughout the EU due to the variable industrial CNG price, VAT and excise duty. Three different examples (Bulgaria, Belgium and Sweden) were chosen to demonstrate this variability and are shown on the graph above.

The lowest average CNG price can be found in Bulgaria at €0.57/kg. The reason is that the industrial CNG price is among the lowest in EU of €0.44/kg, in comparison with €0.67/kg in Belgium or €0.96/kg in Sweden.

In Belgium, there is no excise duty for CNG, effectively meaning that drivers safe €0.12/kg on average, in comparison with other countries. In Sweden, despite the CNG price being the highest in the EU, the market share of NGVs is still above the EU average, proving the viability of natural gas as a fuel.

# NGVA Europe is

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BoD members ◇ BoD candidates ◇ New members since June 2017.

## Board of Directors


## BOD Candidates


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