

# The Future of Autogas

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Bogotá, Colombia

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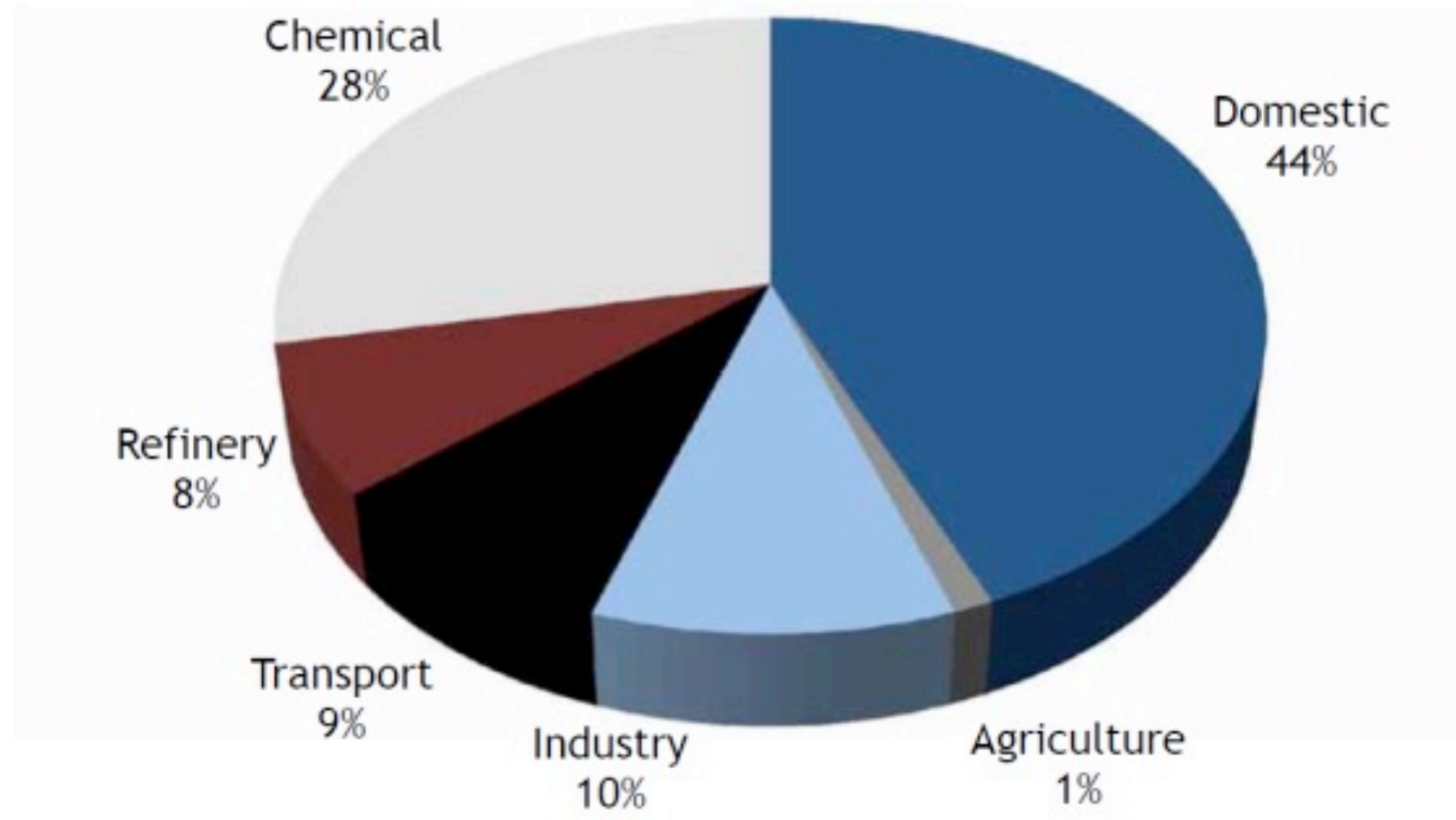
1. Global Overview
2. Opportunities for Autogas
3. Key Drivers
4. Case Studies
5. Autogas to 2040 – a Global Roadmap



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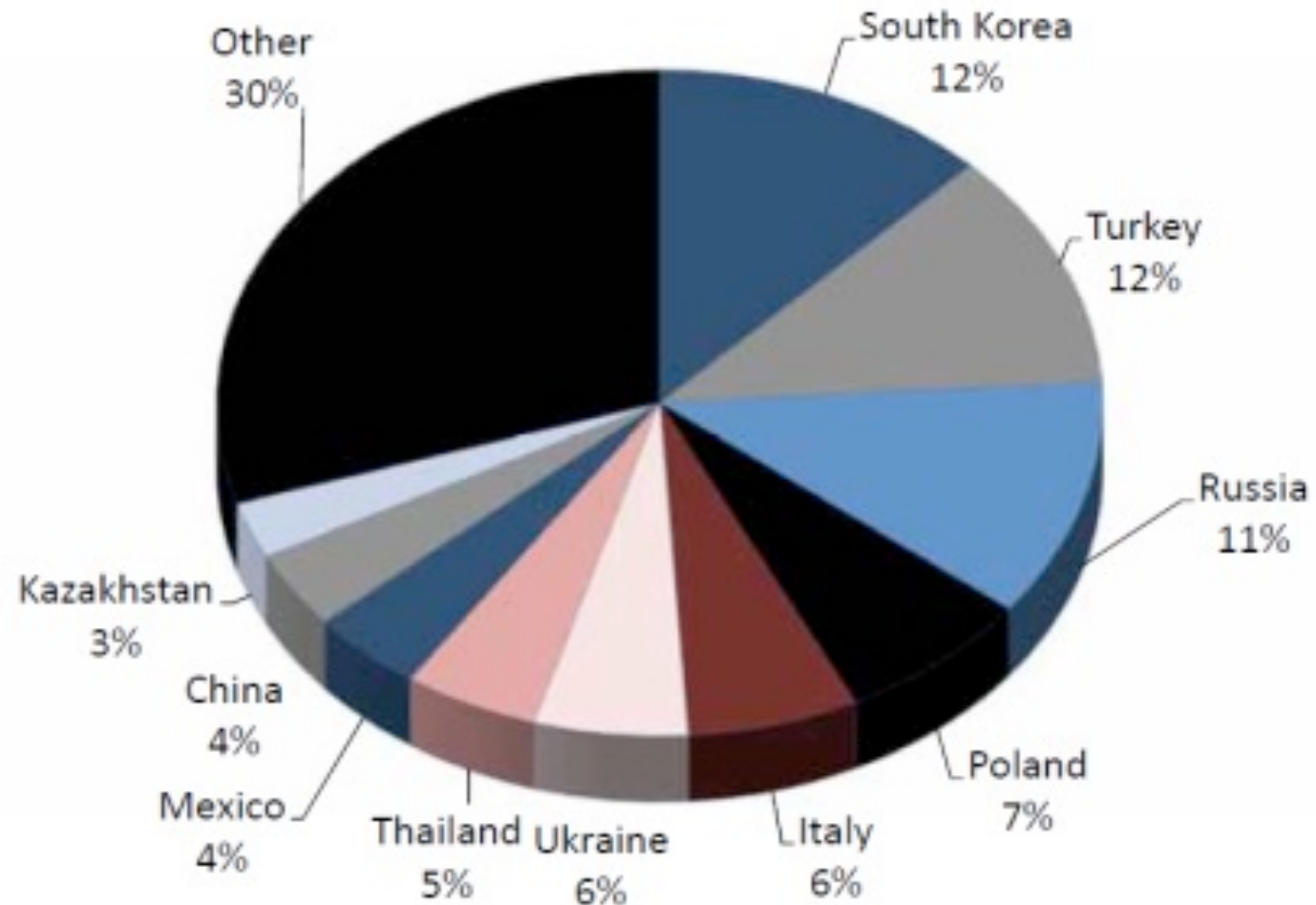
# Autogas is 9% of Global LPG Demand

LPG consumption by sector, 2017

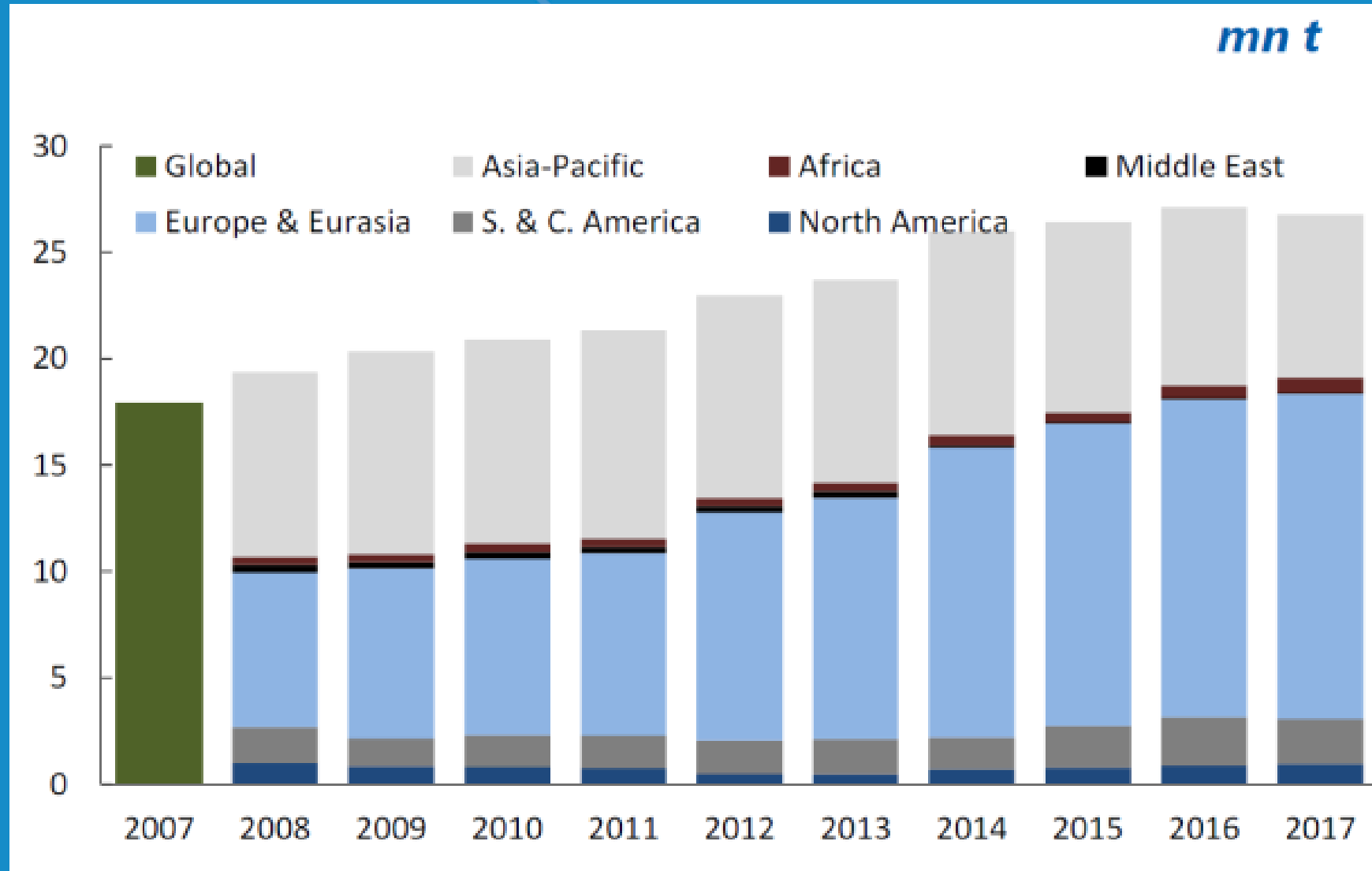


# 70% of Demand in 10 Countries

## Autogas consumption top 10



# Global Autogas Demand by Region



# Global Statistics (2017)

## North America

🔹 936 000  
🚗 209 108  
🚩 6 050

## Europe & Eurasia

🔹 15 307 000  
🚗 19 226 282  
🚩 56 429

## Asia Pacific

🔹 7 695 000  
🚗 6 301 371  
🚩 9 663

## Latin America

🔹 2 114 000  
🚗 996 864  
🚩 5 017

## Africa/ME

🔹 783 000  
🚗 402 500  
🚩 1 108

## Global figures

🔹 26.8 million tonnes  
🚗 27.1 million vehicles  
🚩 78 267 stations

🔹 Consumption (tonnes)  
🚗 Fleet  
🚩 Dispensing sites

# Autogas Trends (2011-2016)

North America + 77%



Europe & Eurasia +32%

Western Europe in decline  
Eastern and Southern  
Europe in growth  
Opp in Central Asia



Africa +8%



Latin America +38%



Asia Pacific -10%



Global trend

💧 + 15%

🚗 + 19%

🚩 + 15%

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40p  
The essential daily briefing  
FROM THE INDEPENDENT  
WEDNESDAY 23 SEPTEMBER 2015  
Number 1,000

# Toxic scandal on our roads

» Millions may be driving UK vehicles that breach pollution targets  
» Transport Secretary demands EU-wide inquiry into car industry  
» VW sorry after world's largest car-maker is caught rigging tests

**NEWS**  
**Pig-gate**  
PM's military record now under fire

**WEALTH**  
Entrepreneur hikes cost of life-saving drug by 5,500%

**MUSIC**  
Shang-A-Lang again? Return of the Rollers

**THE ECONOMIST**  
Assad, IS and the future of Syria  
Can Chinese consumers save the world?  
The rise and rise of the £1m home  
Welcome to the Drone Age  
Pornography and Generation XXX

# THE TIMES

Wednesday September 23 2015 | thetimes.co.uk | No 71710

## 2 London fashion special

The shoes! The bags! The front row!

Plus Are you wearing the new midis? The fashion editors' picks

WH Smith is forced to

# Volkswagen in meltdown after faked diesel tests

rivers face mass recall as share price crashes

» VW shares drop 20% with investigations set to widen  
» Industry faces 'Libor moment'

The German car-maker's share price fell almost 20 per cent over its debut on the London Stock Exchange on Tuesday. The company's share price was down 16.7 per cent at 162.4p, down from 194.5p on Monday. The VW logo is shown.

# FINANCIAL TIMES

THURSDAY 24 SEPTEMBER 2015

World Business Newspaper

Avoiding schism  
What the church can teach the Big Four — ANDREW HILL, PAGE 16

End of the rice age  
Falling prices and demand hobble Japan's once all-powerful industry — BIG READ, PAGE 11

Call me Dave  
Petty revenge unlikely to do much damage — MATTHEW ENGEL, PAGE 2

# Volkswagen emission test cheating rocks Europe's car manufacturers

» VW shares drop 20% with investigations set to widen  
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The German car-maker's share price fell almost 20 per cent over its debut on the London Stock Exchange on Tuesday. The company's share price was down 16.7 per cent at 162.4p, down from 194.5p on Monday. The VW logo is shown.

# The Daily Telegraph

From ball gowns to back-packs — key looks to buy now

Special report, pages 10-13

**NEWS**  
E.ON is swiped off FTSE 100 shares

**WORLD**  
VW scandal: petrol cars could also be rigged

**UK**  
Straw used UK consul to check job offer firm

# Les Echos

LE QUOTIDIEN DE L'ÉCONOMIE / MARDI 29 SEPTEMBRE 2015 / LESECHOS.FR

## Volkswagen: enquête sur les origines d'un désastre

» Retour sur l'épopée américaine qui a fait chuter le leader mondial.  
» La banque du groupe allemand dans la tempête.

The VW logo is shown.

# Dirty secrets of the car industry

The VW logo is shown.

# NO MORE LIES!

GREENPEACE

The VW logo is shown.

# VW SCANDAL SPREADS TO EUROPE

## WE'RE FUMING

Pollution tests on cars in UK

The VW logo is shown.

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# Diesel – the Pressure is on...

‘...Paris, Madrid, Athens and Mexico to ban the most polluting cars and vans by 2025 to tackle air pollution...’

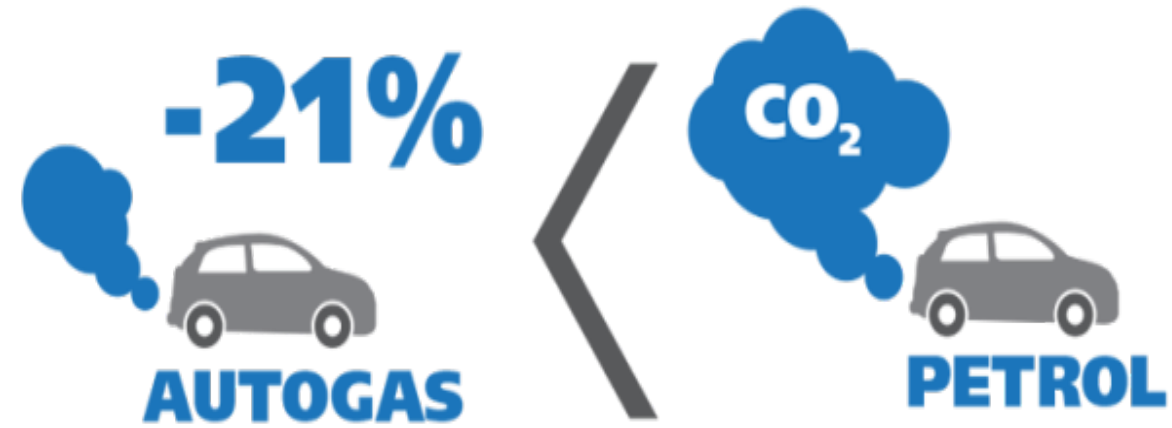
‘...France and Britain to ban sale of all diesel and petrol cars and vans from 2040...’

‘...All Volvo cars to be electric or hybrid from 2019...’

ON AVERAGE, COMPARED TO PETROL,  
**DRIVING ON AUTOGAS EMITS**



ON AVERAGE, COMPARED TO DIESEL,  
**DRIVING ON AUTOGAS EMITS**



CALCULATED ON A WELL-TO-WHEEL BASIS

## AUTOGAS IS



USED AS A **ROAD TRANSPORT FUEL**  
ALSO CALLED LPG, OR PROPANE

## LPG IS A CO-PRODUCT OF



**NATURAL  
GAS**

OR



**OIL  
PRODUCTION**

AND THUS RESOURCE EFFICIENT  
BY ITS VERY NATURE.



**60%** OF ALL LPG  
PRODUCED ACTUALLY  
DERIVES FROM NATURAL  
GAS EXTRACTION

## LPG IS EASILY

**TRANSPORTED  
AS LIQUID**



**BUT HAS ALL  
THE BENEFITS  
OF A GAS**



THERE ARE CLOSE TO

**27  
MILLION  
AUTOGAS  
VEHICLES**

IN USE AROUND THE WORLD



AUTOGAS DRIVERS  
**CAN FILL UP**  
AT ONE OF THE



**REFUELLING  
STATIONS**

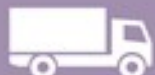


**AUTOGAS POWERS**  
THE LARGEST NUMBER OF  
**VEHICLES RUNNING**  
ON ALTERNATIVE FUELS

## AUTOGAS POWERS



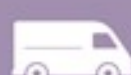
**PASSENGER  
CARS**



**TRUCK**



**AUTO-  
RICKSHAWS**



**DELIVERY  
VANS**



**TAXI**



**BUSES**



AND EVEN **RALLY CARS**

## Autogas – Charter of Benefits

**8** OF THE **10**

LARGEST CAR  
MANUFACTURERS  
**PRODUCE LPG CARS**



**GLOBAL CONSUMPTION OF  
AUTOGAS HAS RISEN BY**

**LPG**

**40%**



IN THE PAST

**10** YEARS

# The Potential for Autogas

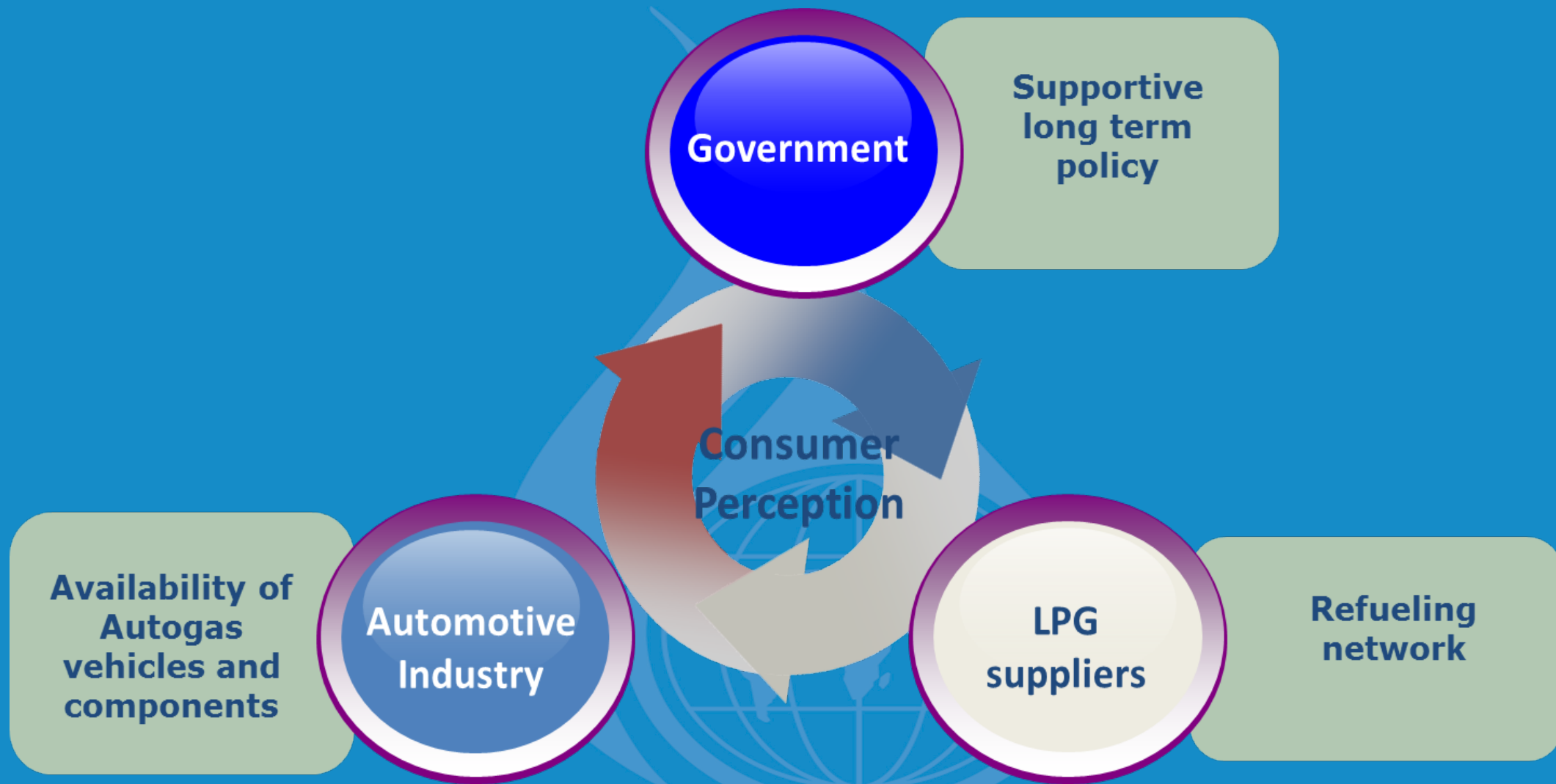
- Global increase in LPG awareness
- Increasing urban air pollution issues
- Global commitment to climate change mitigation
- LPG production surplus
- Diversification of transport fuels

Bring together public authorities, LPG distributors, vehicle and automotive component manufacturers etc. to seize the opportunity

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# Factors Affecting Success

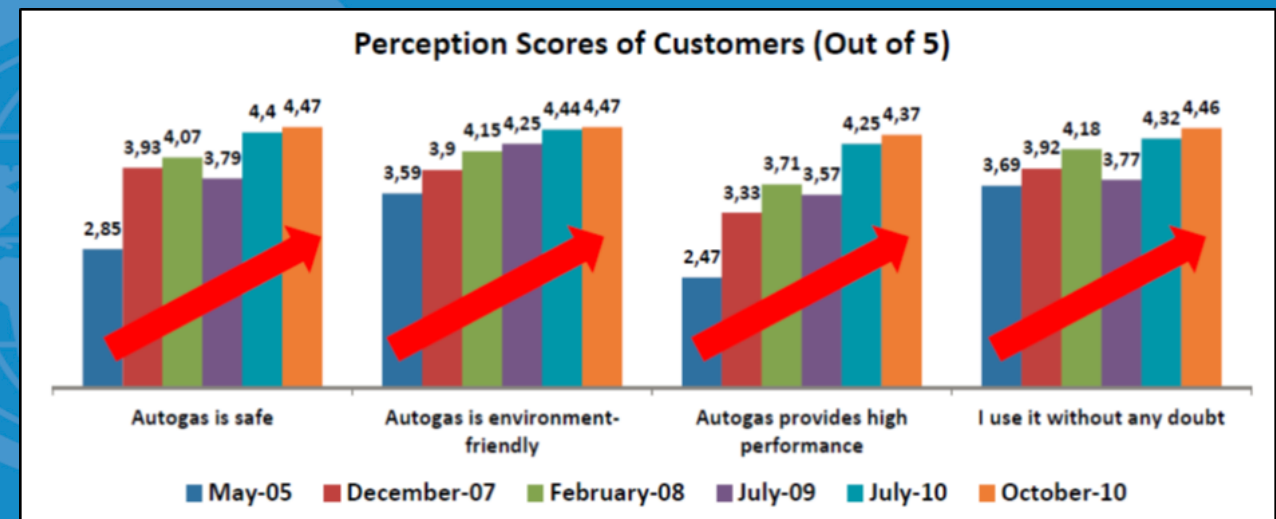


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## Turkey



- Autogas growth stimulated by communication campaigns
- Addressed perception of 'poor man's' fuel...
- ... and focused on clean, safe and high performance benefits of LPG
- Led to an improvement of the reputation of Autogas





## Spain

- Small but fast growing market
- Strong long-term government support
- Goal to reduce diesel imports, supported by low excise tax
- Driving schools targeted
- Grants for purchasing/converting vehicles
- Parking discounts
- Supportive labelling – Autogas is ECO



# Case Studies

## South Korea

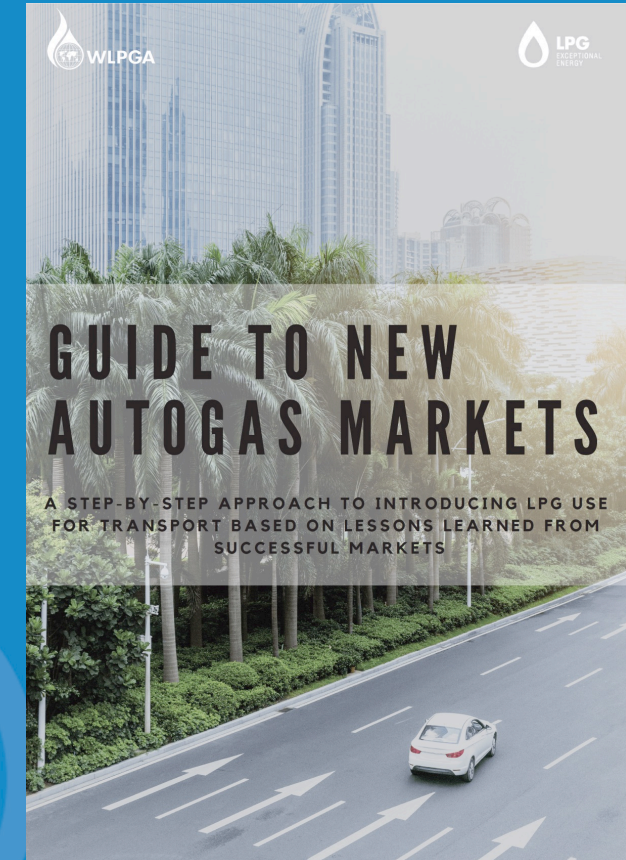
- Favourable taxation policy
- Tight regulations on vehicle emissions
- Challenging environment for diesel
- Government now targeting 'dust' (13/03/19)
- Restrictions on Autogas vehicles just relaxed



# WLPGA Guide to New Autogas Markets



- Published by WLPGA in 2018
- Toolkit for Autogas development
- Includes Case Studies
- Key Standards & Safety Practices
- Three Phase Checklist ...



# New Autogas Markets Checklist

## Preparatory phase

- ✓ Establish a focused industry voice (e.g. LPG Association) to concentrate effort
- ✓ Conduct research to confirm market potential and interest level
- ✓ Identify where LPG sits in the country's energy portfolio
- ✓ Develop the Autogas value proposition tailored to the specific market

## Engagement phase

- ✓ Assemble the industry and other partners together, including car manufacturers/importers, conversion kit manufacturers/importer, LPG component suppliers, environmental groups etc
- ✓ Develop a common roadmap for Autogas development covering all aspects
- ✓ Work with the government to ensure favourable long term taxation policy
- ✓ Explore with the government the possibility to establish other (financial and non-financial) incentives
- ✓ Kick-off Autogas use with a pilot project to demonstrate benefits



# New Autogas Markets Checklist



## Deployment phase

- ✓ Define key targets, e.g. fleets, and develop an outreach plan
- ✓ Launch communication activities to raise awareness of Autogas among targeted audiences
- ✓ Organise demonstrations for target groups
- ✓ Provide vehicles for events to promote Autogas (sporting, races, rallies, charities)
- ✓ Utilise Autogas vehicles within in-house fleets (staff cars)
- ✓ Establish refuelling points/workshops and promote locations
- ✓ Work with OEM's to ensure vehicles are correctly and safely fitted with 'fit for purpose' equipment
- ✓ Ensure quality and safety of conversions and re-fuelling operations
- ✓ Refer to recognised international standards for both vehicles and refuelling network
- ✓ Ensure the availability of maintenance through properly trained personnel
- ✓ Maintain the relationship with partners and governmental authorities to maintain favourable conditions
- ✓ Handle complaints swiftly and ensure resolution

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# WLPGA Global Autogas Roadmap

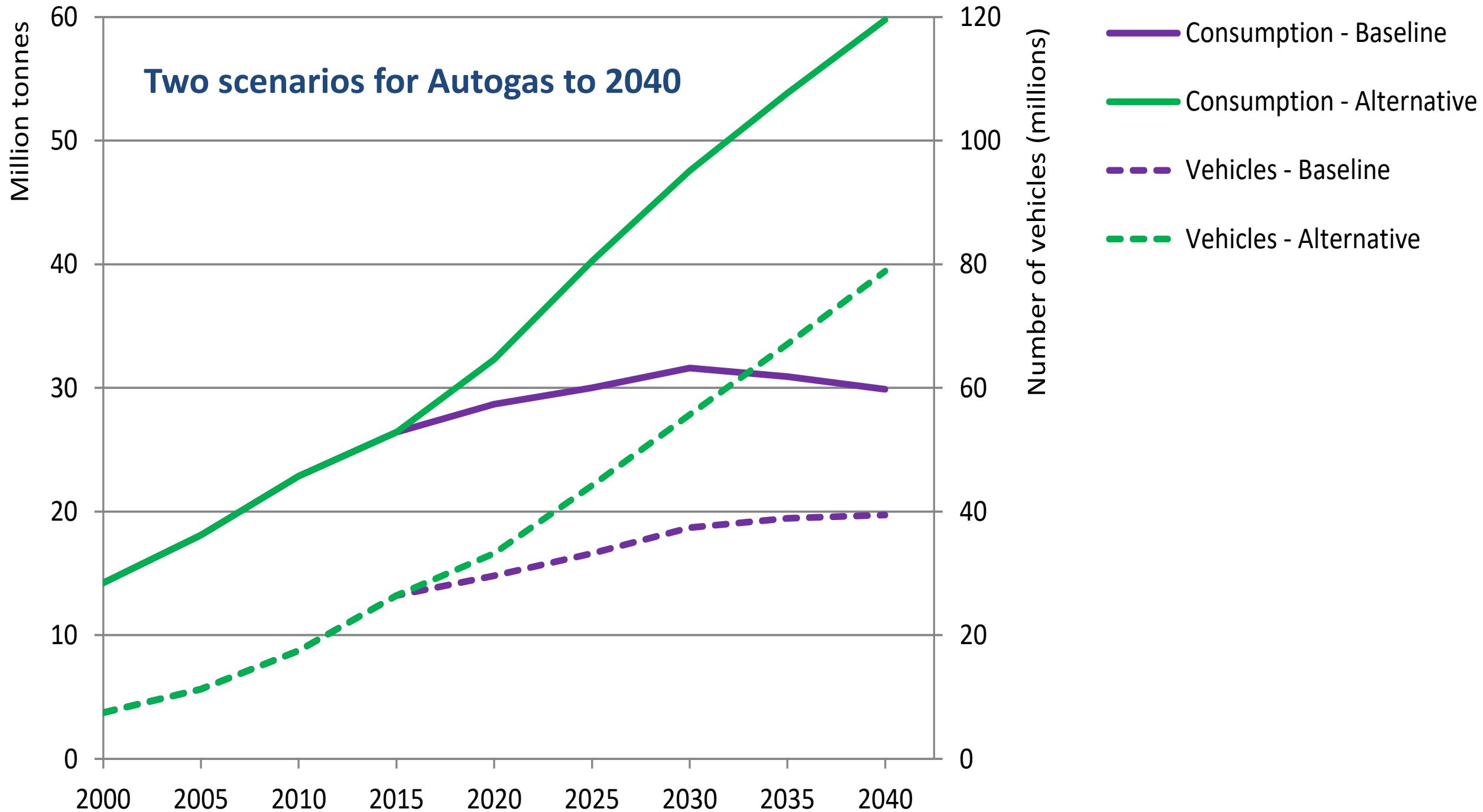


- Published by WLPGA in 2019
- Where could Autogas be in 2040?





## Two scenarios for Autogas to 2040



# The Benefits

4 % - The reduction in global emissions of NOx

5 % - The reduction in PM2.5 emissions

130 million tonnes - Savings on well-to-wheel emissions of CO2  
between

**= Over \$54 billion**

# To Sum Up

The balance of fuels and technologies in a transitional way is the actual pathway into the clean transport future

Autogas has an important role to play as a “bridging fuel” to a sustainable transport system

But concerted action by all key stakeholders is needed to make this a reality

# Thank You!



## 32<sup>nd</sup> World LPG Forum & European Congress

24-27 September 2019 ♡

# AMSTERDAM



- Friday, September 27<sup>th</sup>
- [www.worldlpgforum-aegpl2019.com](http://www.worldlpgforum-aegpl2019.com)
- #WorldLPGForum
- #EuropeanLPGcongress