



Autogas Developments in Global Markets



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10 March 2016



Agenda

- 1** About WLPGA
- 2** An Insight into Autogas Markets
- 3** European Policy Environment
- 4** Case Studies
- 5** Trends and Opportunities



There are more than
one billion cars on the road
contributing to 25% of emissions.
Only 2% are fuelled by Autogas.

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- The only global association representing the LPG industry for over 25 years
- Over 230 members operating in over 125 countries
- Represents the interests of the full LPG value chain from producer to distributor
- Partner with key global organisations such as the World Bank and the UNDP

- 1** Global Cylinder Network (GCN)
- 2** Global Technology Network (GLOTEC)
- 3** Women in LPG Global Network (WINLPG)
- 4** Global Autogas Network (GAIN)

- Grow the use of Autogas as a transportation fuel
- Co-ordinate the efforts and leverage the experience of its members
- Encourage technology development
- Act as a communications and information centre



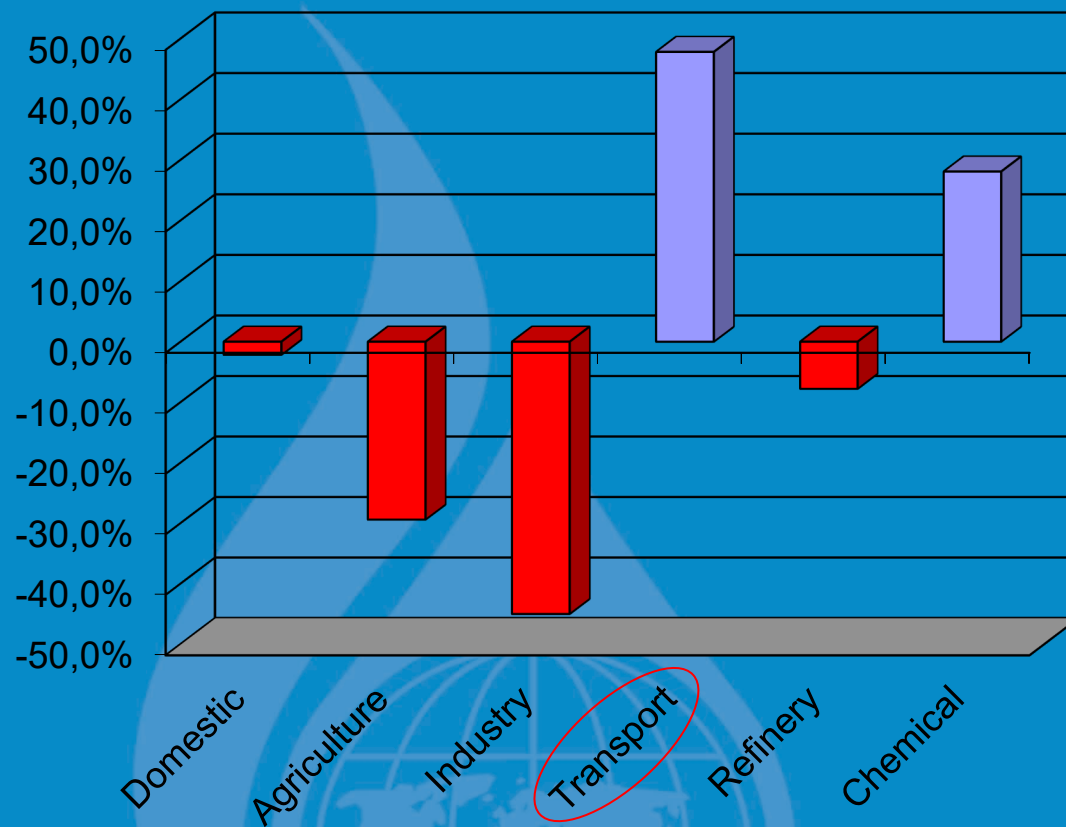
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Shifting Global Demand in Last 20 Years

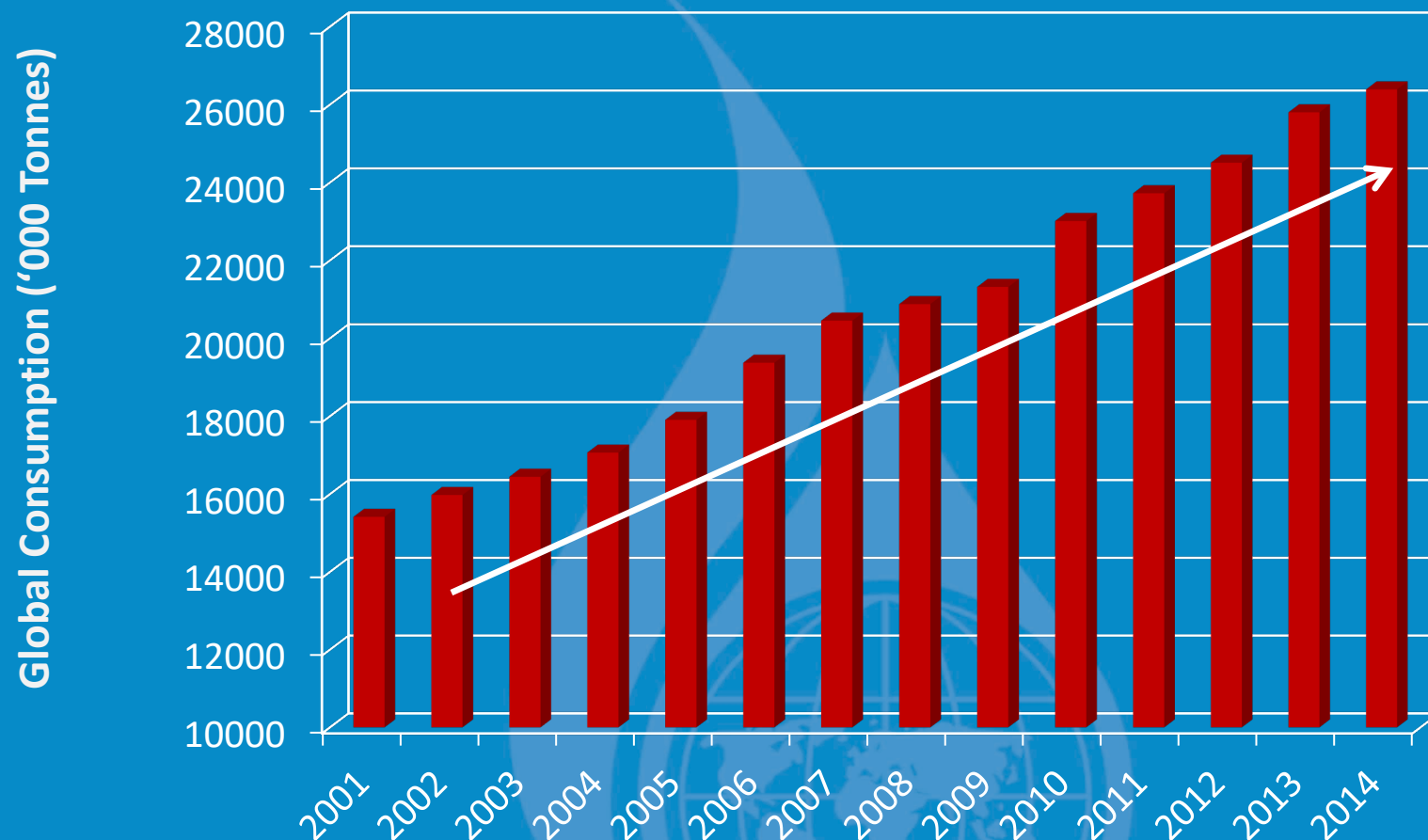


Percentage
change in
demand
between 1994
and 2011



A significant increase in Autogas consumption
Global demand is growing

Global Autogas Consumption



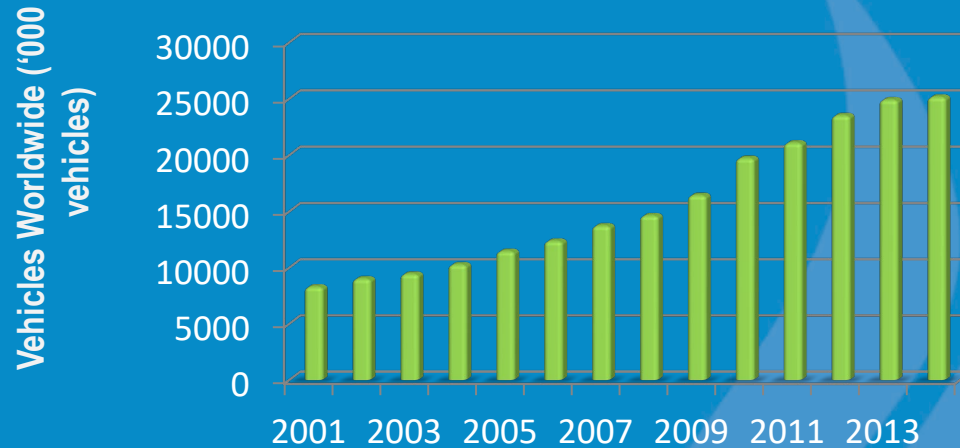
Slower consumption in mature markets – catch up in emerging markets

From 15 mt in 2001 to 26 mt in 2014

26% increase since 2010

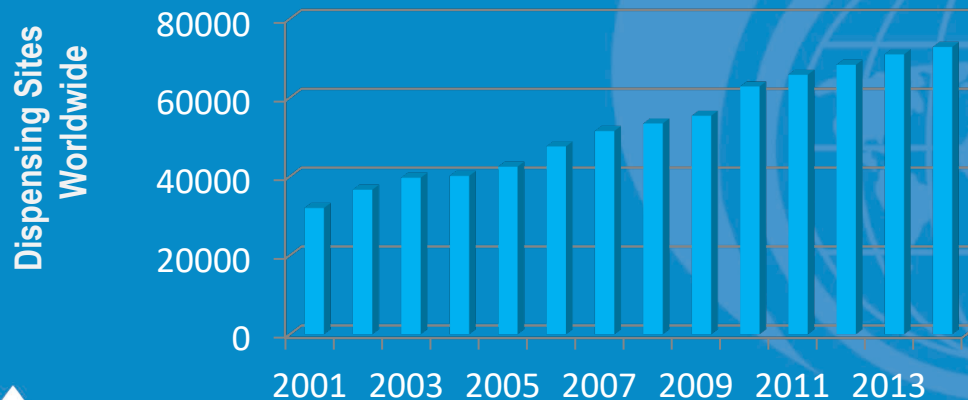
Number of Vehicles and Filling Stations

No. of vehicles



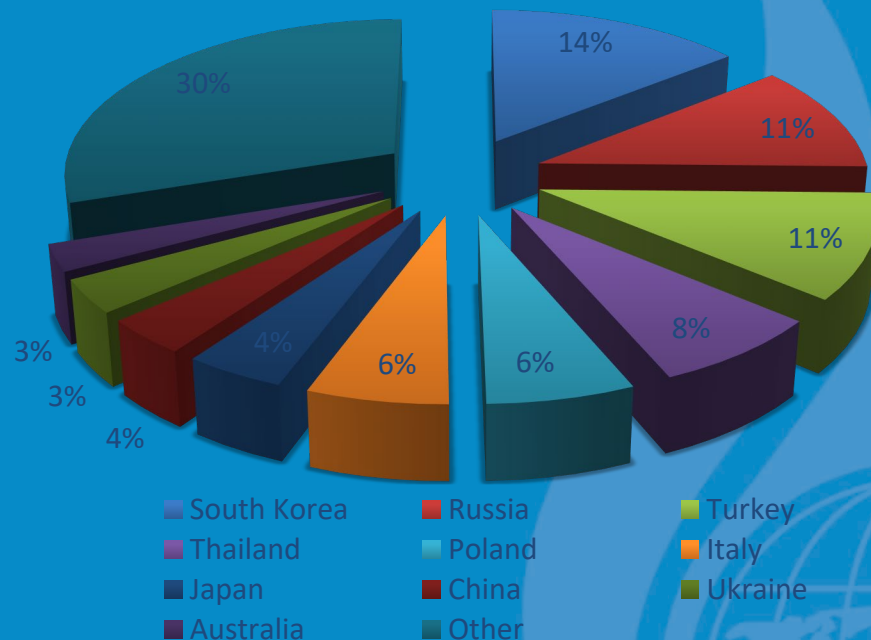
- Vehicle number doubled in last 10 years
- 25 million in 2014
- 14 million in Europe

No. of dispensing Sites



- 73,000 sites in 2014
- From 30,000 in 2001
- Increasing global infrastructure shows optimism

Autogas Top Ten Countries



1. South Korea
2. Russia
3. Turkey
4. Thailand
5. Poland
6. Italy

**Six Countries
= half global demand**

Many markets to explore = Opportunity to grow demand globally

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- The VW scandal catastrophic for trust
- The Diesel question – a ban in Paris?
- Most EU countries in breach of their air pollution reduction targets
- Cities have frequent circulation restrictions due to air pollution peaks
- New global climate deal at COP Paris 2015 – global warming not to be below 2%



Passenger Car Emissions

- Regulations in 2014 caps CO₂ emissions at 95gCO₂/km by 2021 (fleet average)
- Currently around 130gCO₂/km
- All tests done in labs
- Real Driving Regulation will ensure that emissions in real world conditions are similar to the levels measured in laboratories

- 18 EU Member States under infringement proceedings for exceeding PM and NO₂ limits
- National Emission Ceilings Directive revised 2030 targets for many pollutants in line with the Gothenburg Protocol
- Increasing Urban Access Regulations at local level to reduce air pollution -> favour alternative technologies



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USA School Buses

- Portland Public Schools transport over 12,000 students in a school year
- 94% of the fleet is LPG powered
- LPG school buses travel over 3.5 million miles each year
- Benefits: lower fuel costs, performance, better air quality
- Support from local authorities



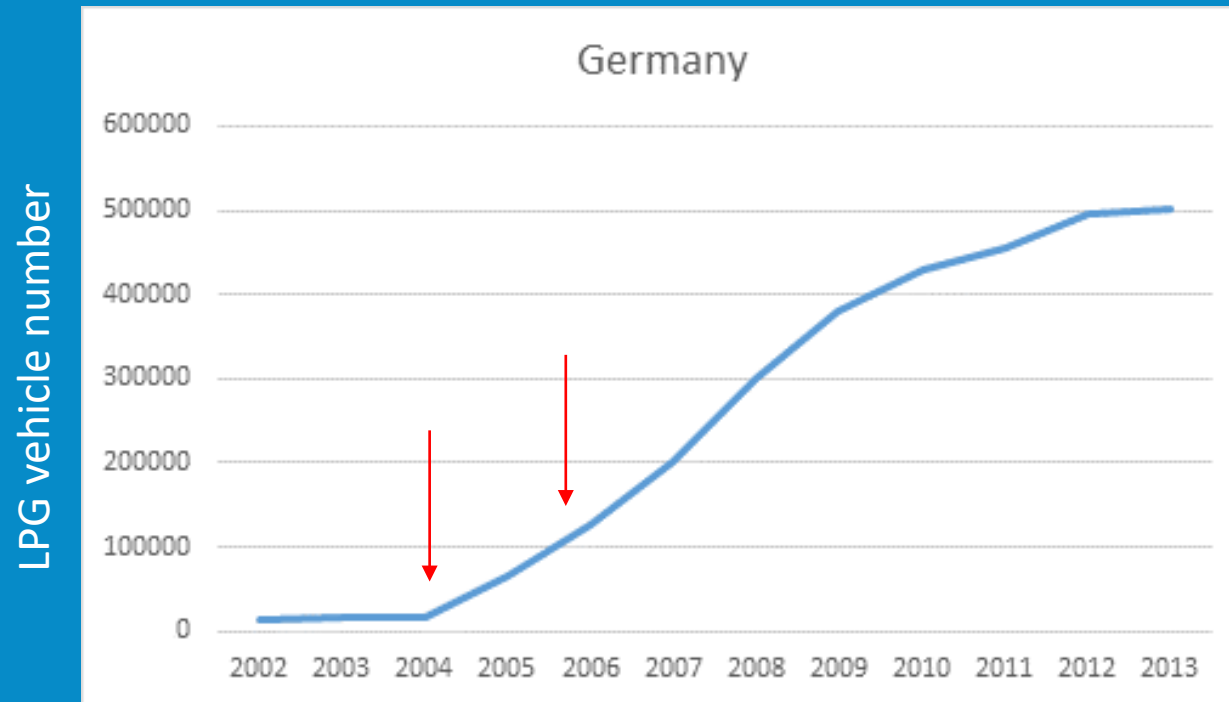
Certification System in the UK

- Network of approved Autogas installers
- Certificate of conformity
- Central database: UKLPG Vehicle Register
- Proof of reliability for insurance companies

**Reliability = Increase in
consumer confidence**



Government Incentives in Germany



- Peak price for gasoline in 2005
- Government announced long term tax reduction for LPG in 2006 to 2018

Low Emission Zones in Italy

Rome

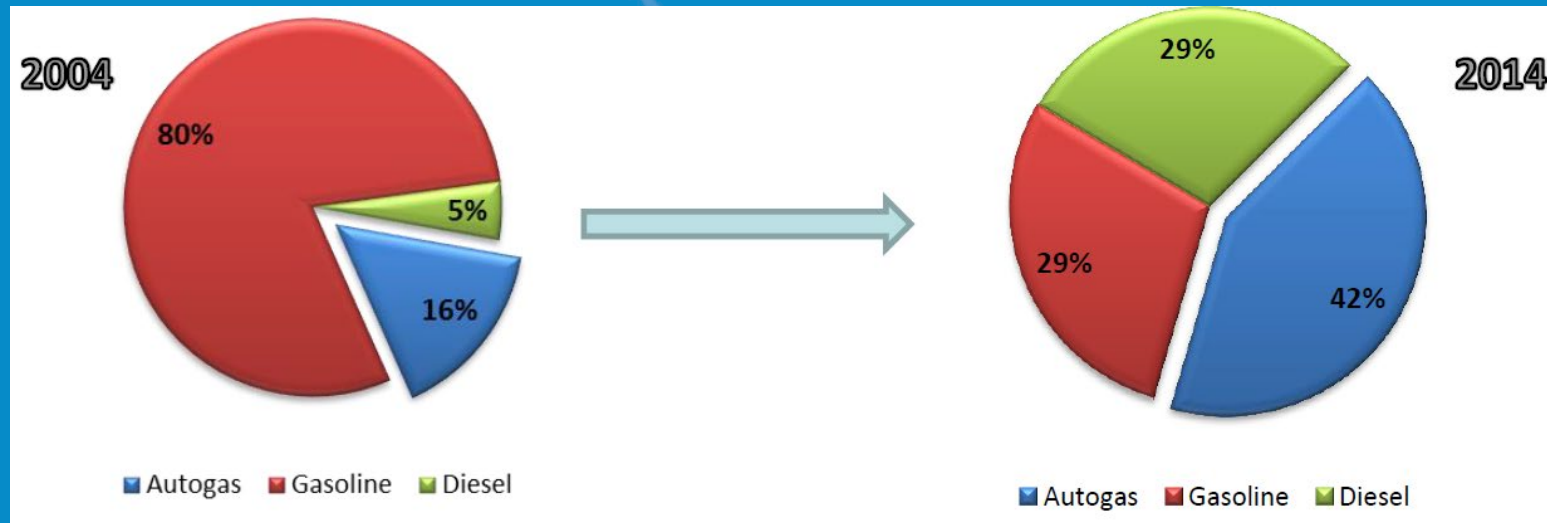
- Only residents can access
- Permits are average 20% cheaper for LPG, CNG, electric and hybrid vehicles than for gasoline or diesel

Milan “area C”:

- Ban some gasoline and diesel vehicles
- Residents can access for free 40 days/year, and then for 2 €/day
- Non-residents pay 5 €/day
- LPG, CNG, hybrid and electric vehicles can access for free



Autogas expansion in Turkey



- Favourable price differential vs gasoline/diesel
- Improvement in perceptions
- Autogas has 42% of the market
- Over 4 million vehicles and 10,000 sites

Aygaz – Successfully Changing Perceptions



- From performance perceptions to emotive branding
- 3.2 m Facebook views
- 2.1 m Youtube views



AYGAZ_OTOGAZ_69SEC_ENG_SUBTITLE_69SN_22.01.2016.mp4

Learn more!

Autogas Incentive Policies

A Country-by-Country Analysis of Why and How Governments Encourage Autogas and What Works

2015 Update



Available FREE from
www.auto-gas.net

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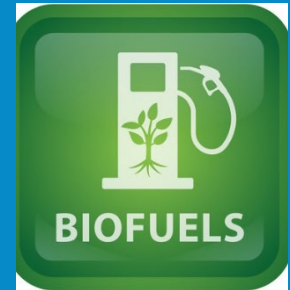
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Alternative Fuels



- ✓ Environmental benefits approximately the same
- ✓ Fuel price may be lower
- ✗ Heavy fuel tanks, limited vehicle range, refueling availability low

- ✓ Success in Brazil and in the US
- ✗ Incentives being questioned due to rising food prices and doubts on CO2 performance



- ✓ Potential to become the cleanest solution
- ✗ Expensive, battery capacity issues, need for clean electricity production

OEM Vehicle Availability - OEM



For Mature Markets ...

- LPG supply expected to keep growing, and prices to remain low
- Switch from a climate-centric environment policy to focus on air quality
- Favourable global and EU policy environment
- Electricity seen as the silver bullet, but limited take up so far
- Other new technologies not available yet



Autogas has a key role to play

- Global Autogas market is growing sustainably, both in mature and emerging markets
- Government policy essential in expanding markets
- Key role for OEMs/kit manufacturers and fuel marketers
- Autogas markets can grow with the right set of incentives and the right level of investment
- Autogas is a chance to address environmental challenges and dependence on oil

Benefit from WLPGA's Work



Visit www.auto-gas.net
Register for Autogas Updates
Autogas benefits video



Benefit from WLPGA's Work

Autogas benefits video



Autogas Video 2015.mp4

And finally



29th World LPG Forum & 2016 AEGPL Congress

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29th World LPG Forum & 2016 AEGPL Congress

Istanbul, 27th - 29th September 2016

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