

# Study "Legal and Regulatory Environment for the Construction and Operation of CNG Filling Stations in European Countries"

### BACKGROUND TO THIS PROJECT (2011-2012)

- Sponsor: European Business Congress
- Primary Contractor: National Gas Vehicle Association Russia, assisted by Clean Fuels Consulting
- Project Scope
  - 21 European NGV Country Profiles (West & East Europe) – PowerPoint file
  - Legal & regulatory environment to build fuelling station network – Excel File
  - Strategic approaches to create NGV fuel infrastructure – PowerPoint file
  - **NGV Infrastructure Calculation Tool (NICA)** – Excel File

The European market for natural gas vehicles has been expanding steadily since 1994 when there were 524,000 natural gas vehicles (NGVs) and 1,693 CNG fuelling stations. Today the European market has expanded to 1.5 million NGVs and 4,000 fuelling stations; growth of 286% and 236% respectively.

While NGVs and the fuelling infrastructure are a practical potential business opportunity they compete with the 'politically attractive' technologies such as hydrogen fuel cells and electric battery vehicles.

Thus, the time is right for the wider European business community to be made aware of the 'NGV potential.' This is best done by highlighting the excellent opportunities to invest in a sustainable fuel and technology that addresses today's important concerns about energy and the environment through the wider use of NGVs, whether they run on fossil natural gas, liquefied natural gas or renewable biomethane.

The European Business Congress has recognized this need and now is seeking a way to inspire new investments in the CNG fuelling infrastructure across Europe. Once in place, this can lead to a much more widespread development of the European NGV market in individual countries that are linked across Europe along the normal transportation corridors.

**The project sponsors wish to thank the following individuals for their dedicated research and analysis in making this project possible**

- EBC Project Coordinator: Detlef Wessling, E.On Ruhrgas
- NGVRUS Project Manager: Eugene Pronin, Gazprom
- Clean Fuels Consulting
- Principal Investigator: Dr. Jeffrey M. Seisler
- Research Assistant: Marco Dal Pont
- Project engineer for the Natural Gas Infrastructure Calculation Tool (NICA): Gijs van Schoonhoven (Ingenieurbüro van Schoonhoven)

NGV Country profiles provide, in a PowerPoint format, a template of information that represents in-depth analyses on a country-by-country basis. The profiles focus on the specific elements that are important to understand the investment environment to develop a CNG fuelling infrastructure. Taken together, these country profiles provide a unique window into individual markets that may be attractive to different commercial interests investing in the NGV infrastructure.

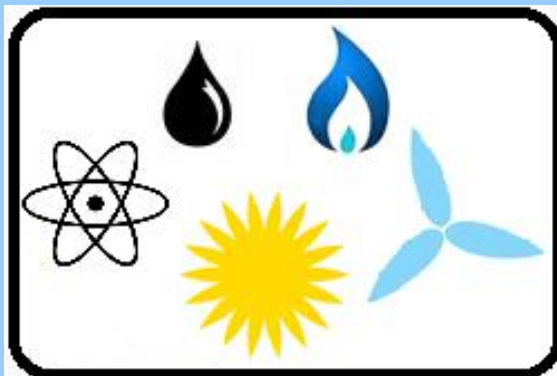


- NGV Profile
- Motivation
- Energy Profile (oil & gas/imports & exports)
- Vehicles
- Fuelling Infrastructure
- Government Support
- Gas Industry Support
- Conclusions

- Number of NGVs: 86.000
  - NGVs are 0,21% of total vehicle population
  - 0,6 NGVs per 1000 population
  - CNG fuelling stations: 251
  - 343 vehicles per fuelling station
  - Price differential CNG-Petrol/diesel:
    - CNG equivalent per liter gasoline: 0,19 €/liter
    - Regular Gasoline: 0,71 €/liter
- Natural gas costs 70% less than gasoline

Source NGVRUS, May 2012

- Environmental advantages
- Economic advantages
- Abundant and affordable gas supply encourages energy diversity (of fossil fuels)





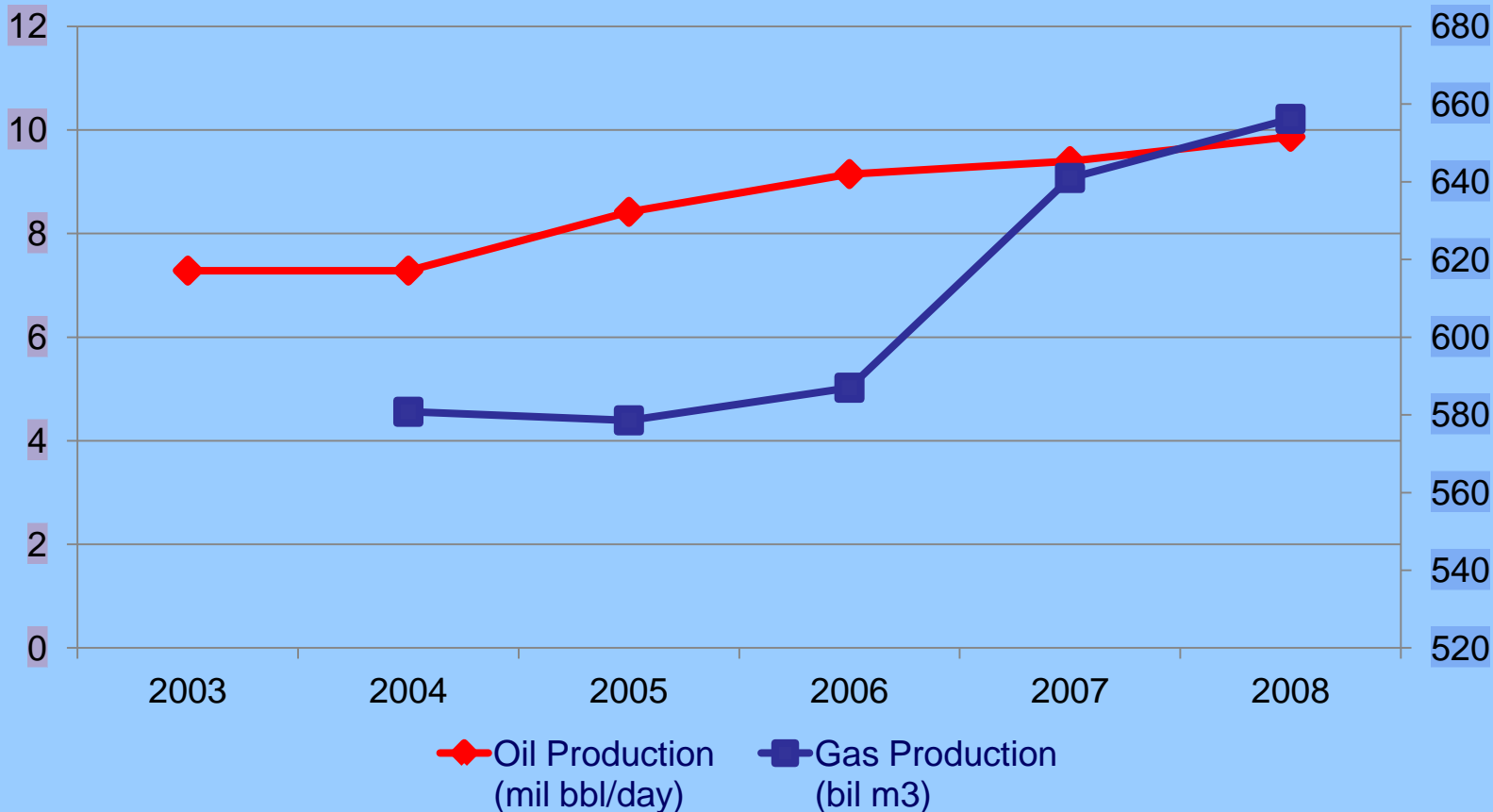
- Russia holds the world's largest natural gas reserves, the second largest coal reserves, and the eighth largest oil reserves. Russia is also the world's largest exporter of natural gas, the second largest oil exporter and the third largest energy consumer
- Russia has the second-largest amount of recoverable coal reserves in the world
- Russia is a major world oil producer, sometimes producing even more than Saudi Arabia. Russia's output rebounded during the early 2000s, but the effects of high government taxation and a mature field-base threaten an overall decline in production



- **Oil**
  - production: 10,12 million bbl/day
  - consumption: 2,74 million bbl/day
  - imports: 42.000 bbl/day
  - exports: 5,43 million bbl/day
  - reserves: 74,2 billion bbl
- **Natural gas**
  - production: 583,6 billion m<sup>3</sup>
  - consumption: 439,6 billion m<sup>3</sup>
  - imports: 35,1 billion m<sup>3</sup>
  - exports: 179,1 billion m<sup>3</sup>
  - reserves: 47,57 trillion m<sup>3</sup>

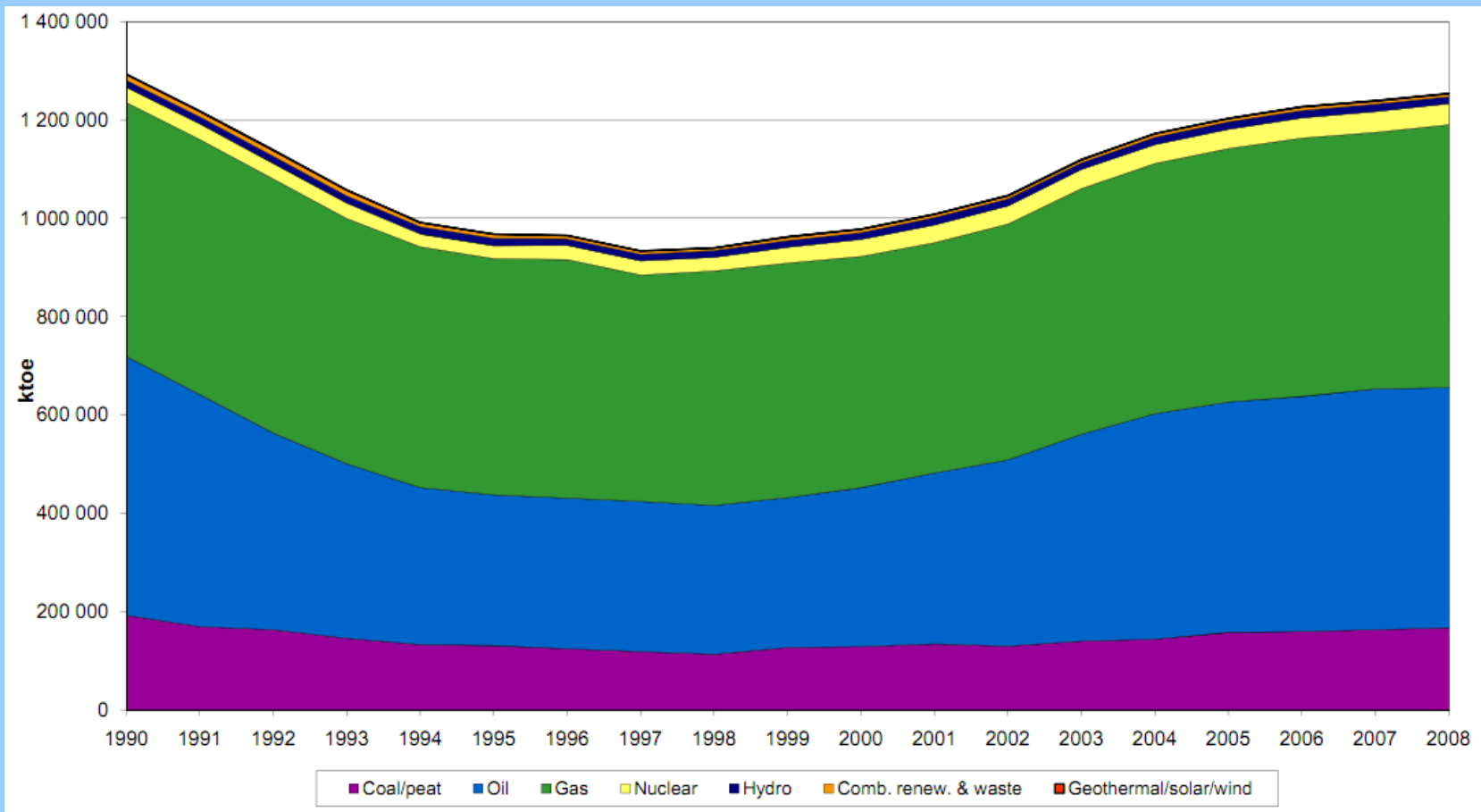
Source: CIA World Factbook 2011

## Oil & Natural Gas Production Remain Strong



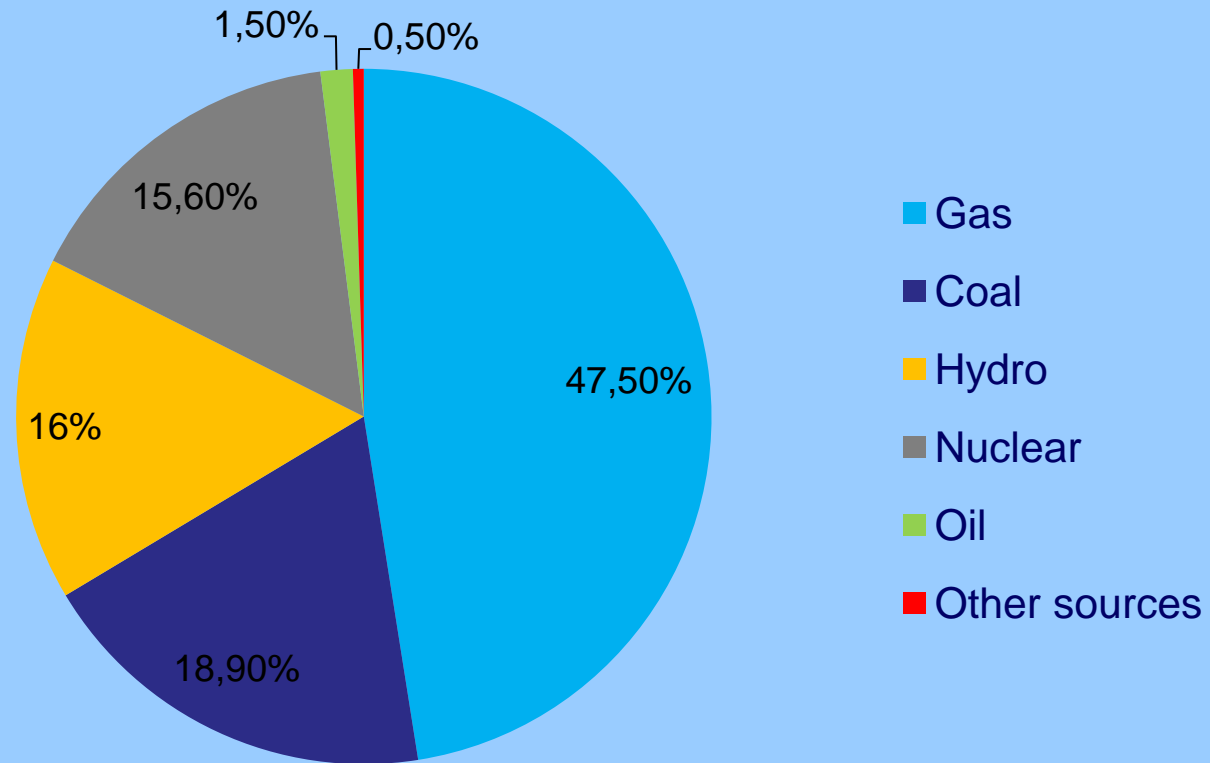
Source: CIA World Factbook

## Total energy consumption shows a great percentage in the usage of oil and gas



Source: IEA statistics, 2011

## Almost half of the electricity is produced using natural gas

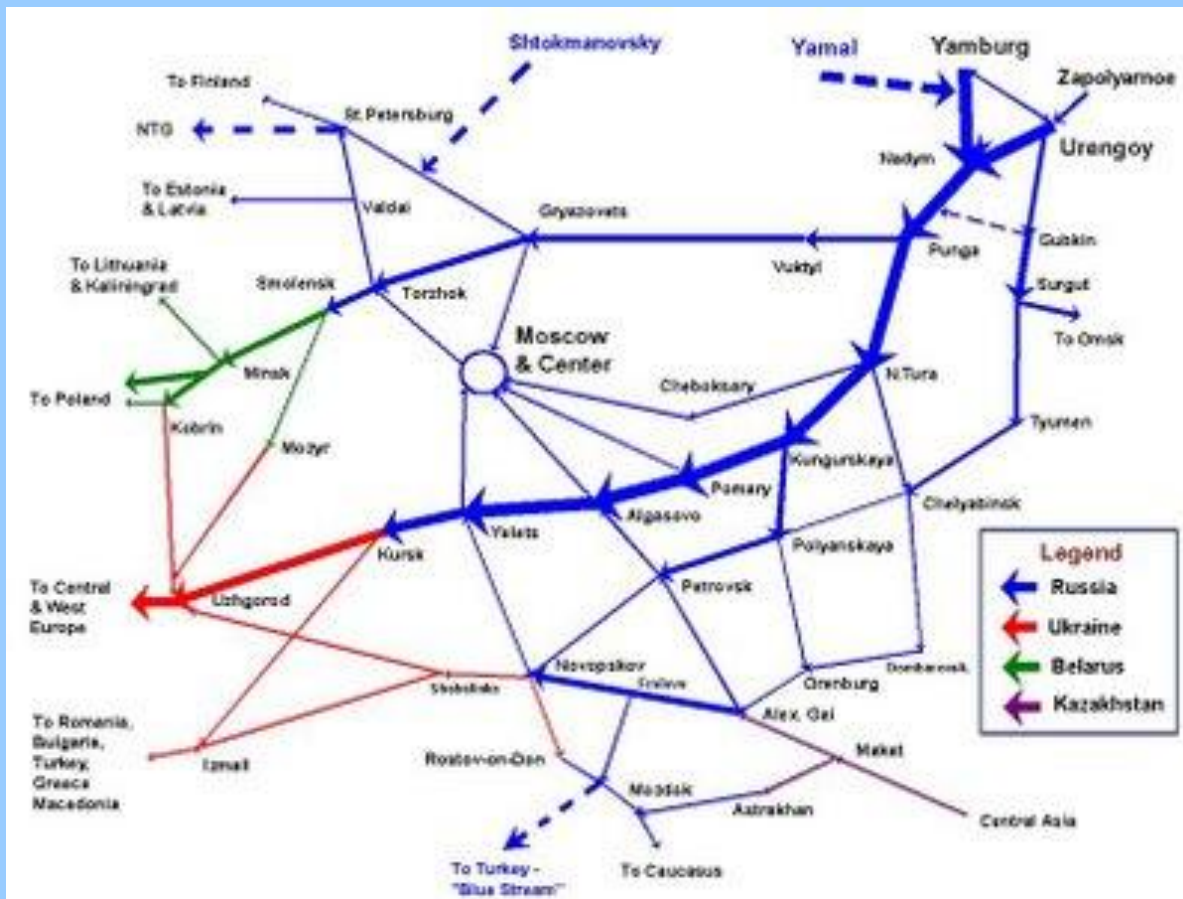


Source: IEA 2009

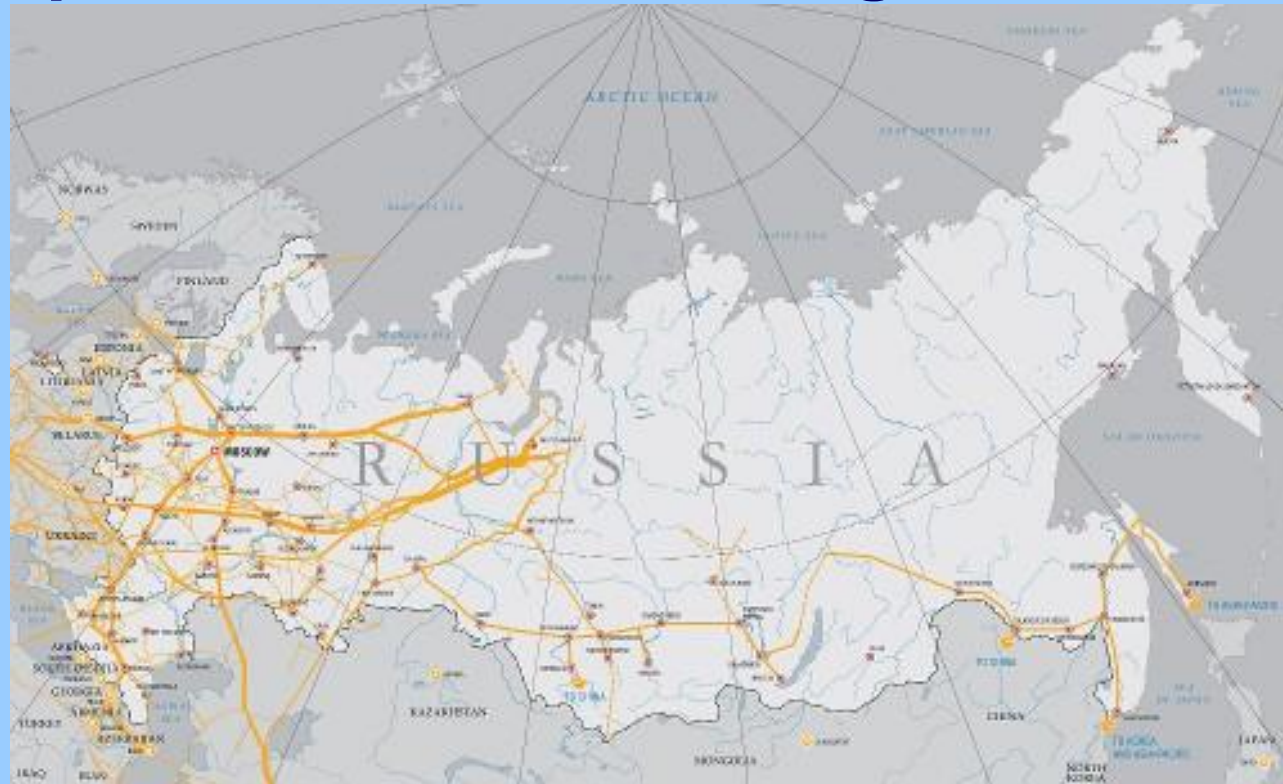
## Russian natural gas transmission & distribution network covers 671.000 km



## The network is being extended to the West, South & linked to the East



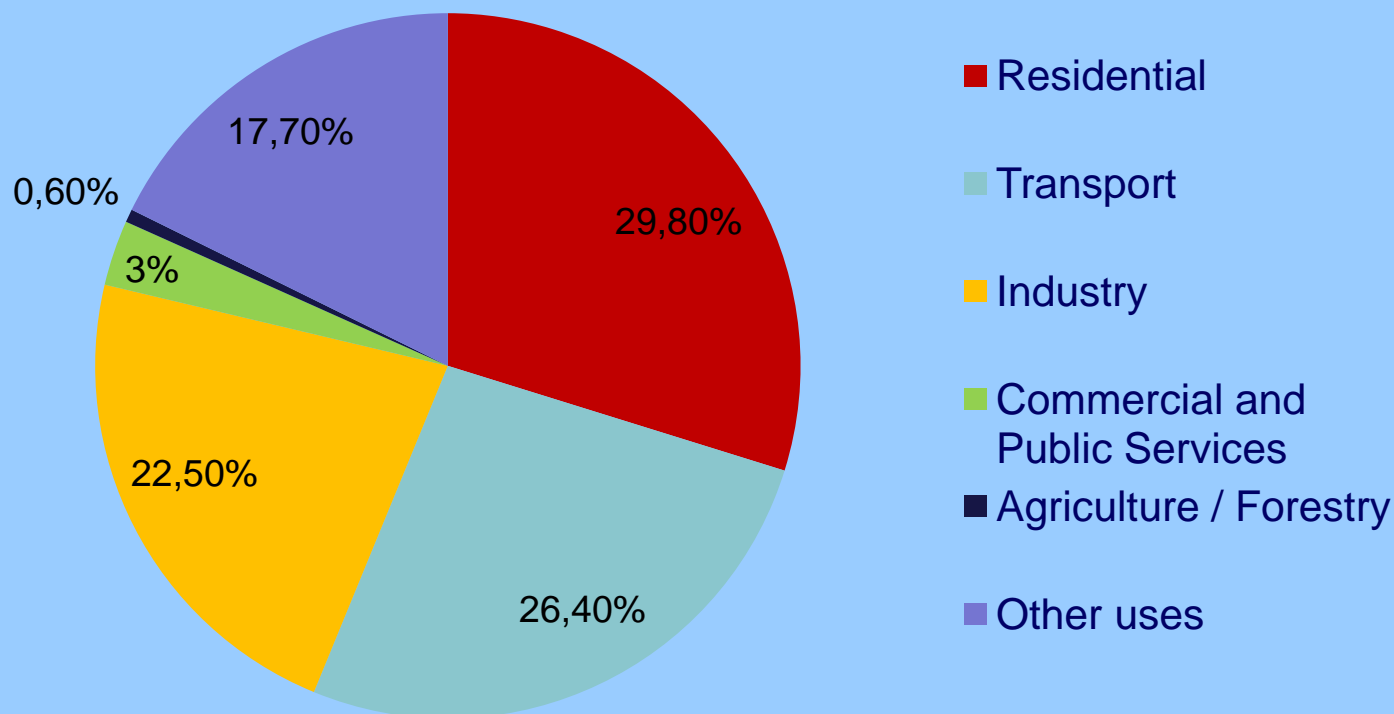
## Gazprom and the Russian gas infrastructure



- Gazprom's share in the global and Russian gas reserves makes up 18 and 70 per cent respectively.
- Gazprom accounts for 15 and 78 per cent of the global and Russian gas output accordingly.
- The Unified Gas Supply System of Russia includes 161,7 thousand kilometers of gas trunklines and laterals, 215 line compressor stations with gas compressor units totaling 42 thousand MW in capacity, 6 gas and gas condensate treatment facilities and 25 underground gas storages.

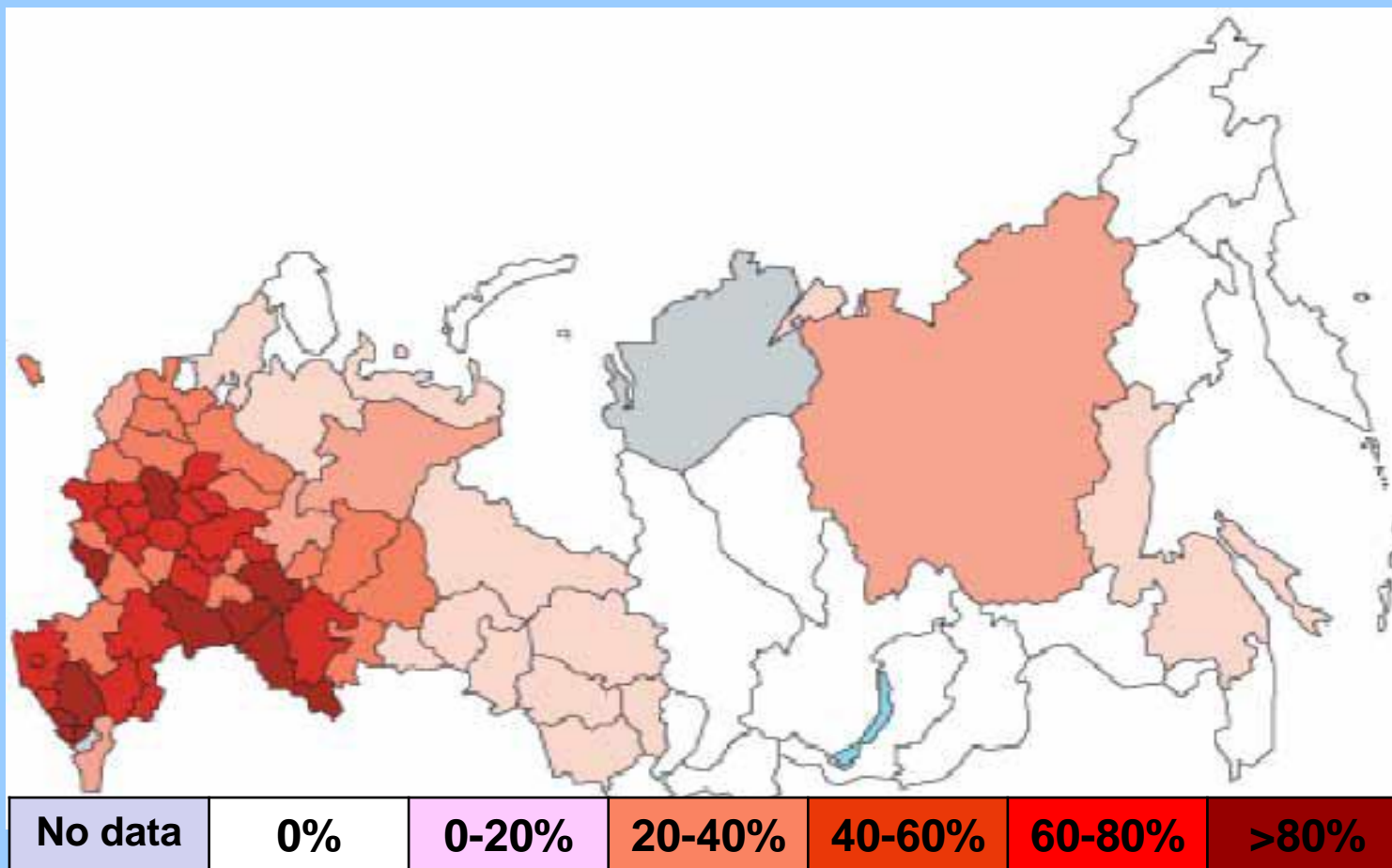
Source: Gazprom, 2012

## In 2010 Russia used 345 million m<sup>3</sup> of natural gas for transport



Source: IEA statistics

## Intensity of natural gas use in Russian regions shows the market potential for NGVs



Source: Environmental Defence, Environmental Aspects of Dual Pricing for Natural Gas in Russia, 2004

## Cooperation Russia-EU on gas transport

- 35 years of deliveries of Russian natural gas in EU:
  - 1973: 7 countries, 7 billion m3
  - 2007: 21 countries, 150 billion m3
- Prolongation of long-term contracts on delivery of natural gas up to 2035 and 2043
- Mutual participation by investments in projects of production, transmission and distribution





## Russia's first plant for LNG was inaugurated near Yuzhno-Sakhalinsk in the far east of the country on 18 February 2009

- The plant will process gas from the Sakhalin-2 extraction projects, consisting of several offshore fields in the Sea of Okhotsk. The consortium involved in the plant as presently constituted includes Gazprom with 50% plus one share, Royal Dutch Shell and the Japanese companies Mitsui and Mitsubishi
- Sakhalin-2 gas reserves are estimated at up to 2 trillion cubic meters
- The total investment in gas extraction and liquefaction is valued at US\$ 22 billion for the project's 20-year lifetime



## Gazprom to boost Small-Scale LNG Production

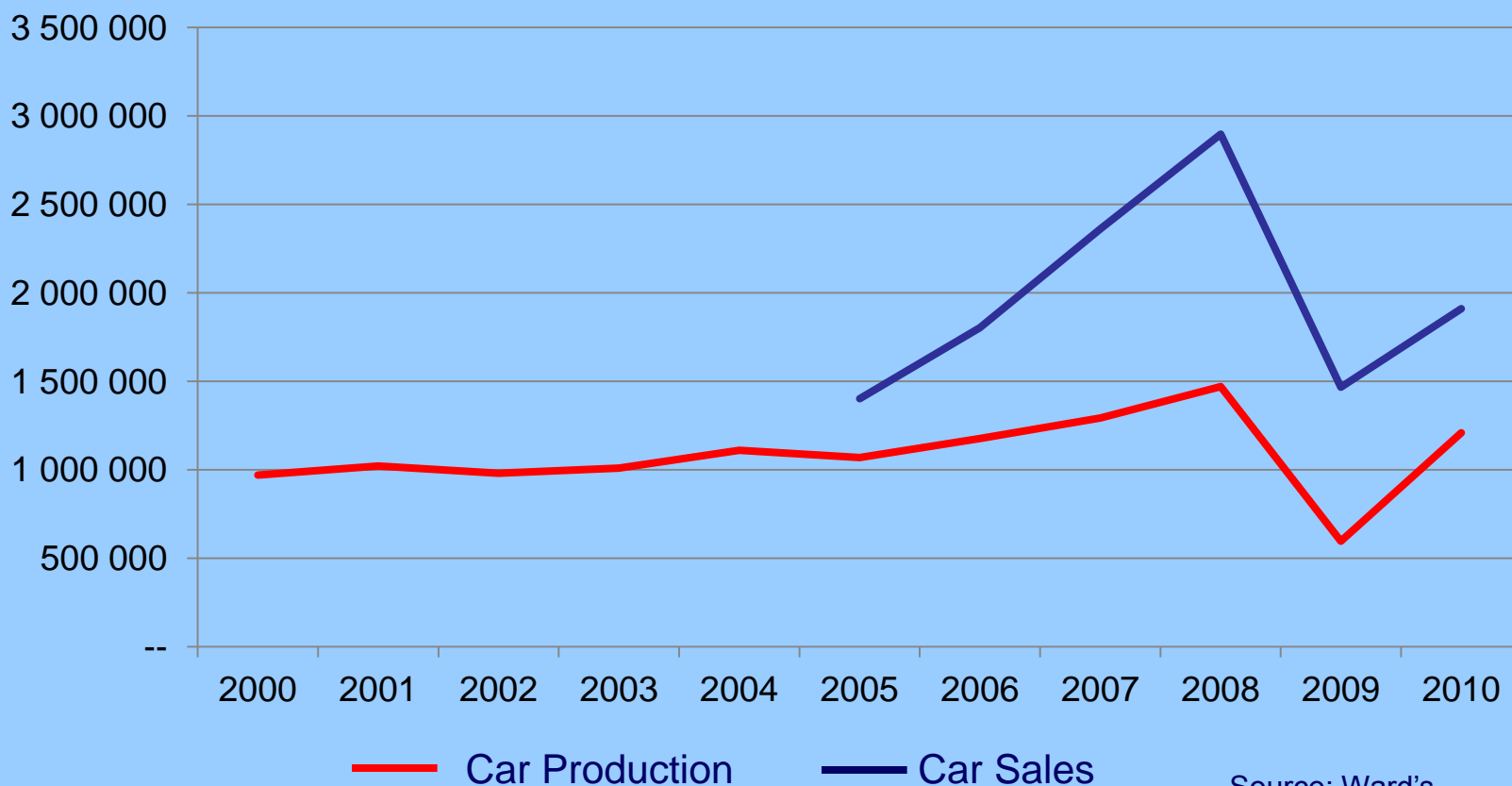
- At a Gazprom's 2010 Science & Technology Council's Workshop it was resolved to develop a regulatory framework for small-scale production, storage and utilization of liquefied natural gas (LNG):
  - Growing interest in small scale LNG plants to facilitate gas distribution, particularly where pipeline gas is not feasible.
  - LNG produced at small-scale plants may be efficiently consumed by households and utilities, heat and power generation facilities as well as natural gas vehicles
  - Gazprom stated that compressor stations, underground gas storage facilities and low-yield fields, in addition to gas distribution and CNG filling stations, are suitable for locating small-scale LNG plants

Source: *NGV Global*, 10 December 2010





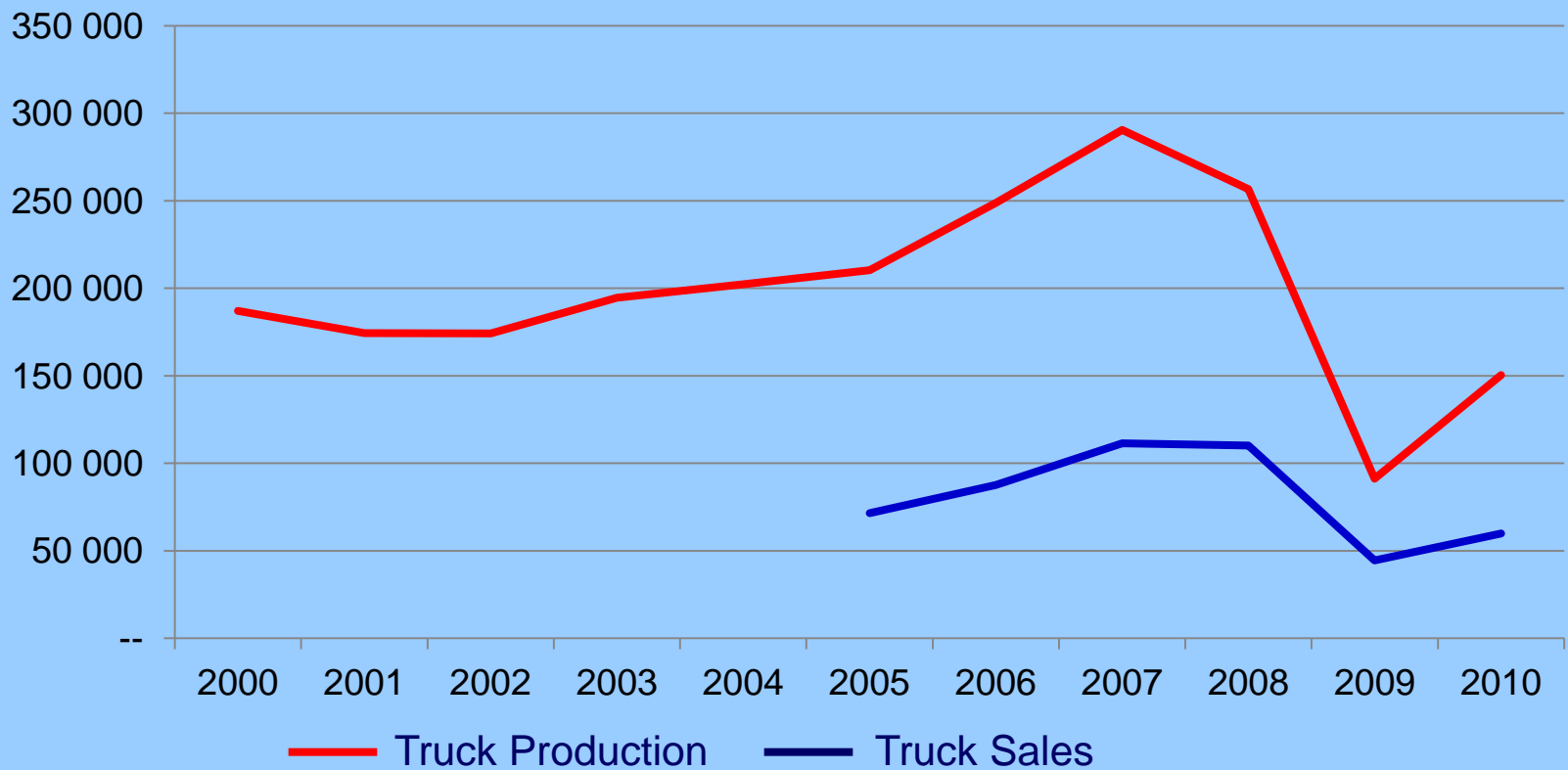
**Few national OEMs producing cars, for this reason the national demand is higher than the production**



Source: Ward's



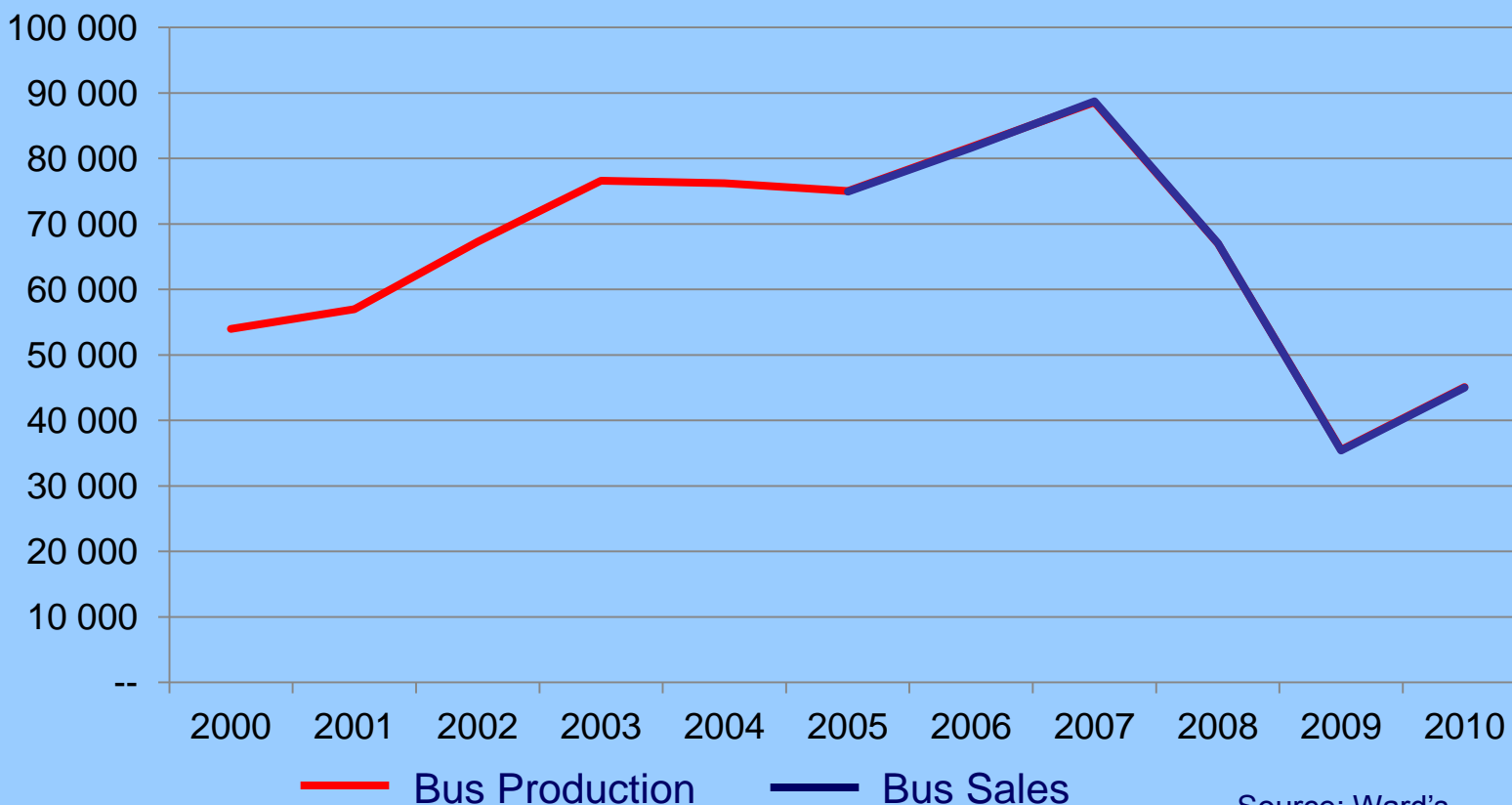
## Trucks production and sales decreased significantly during 2009



Source: Ward's

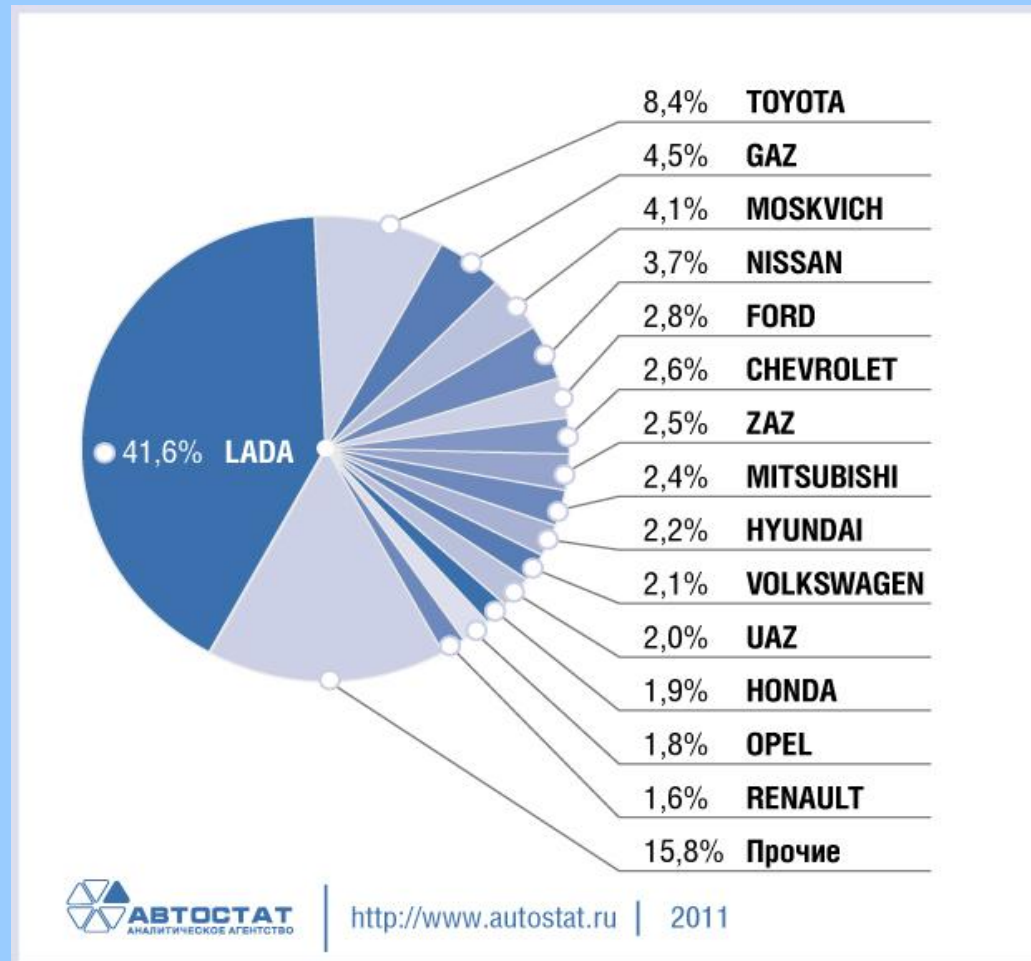


**Bus production and sales are the same, signal that national OEMs have the strongest role in the market**

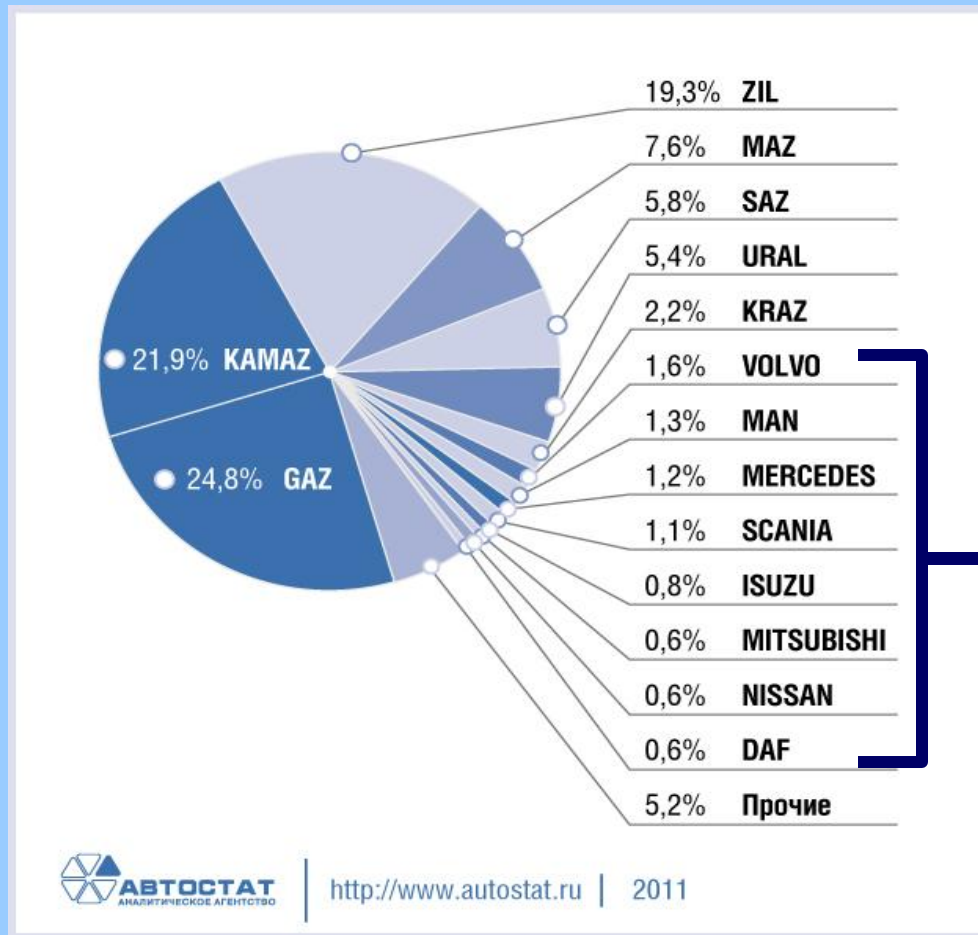


Source: Ward's

More than half the cars – 57% --are produced domestically, with two leading OEMs



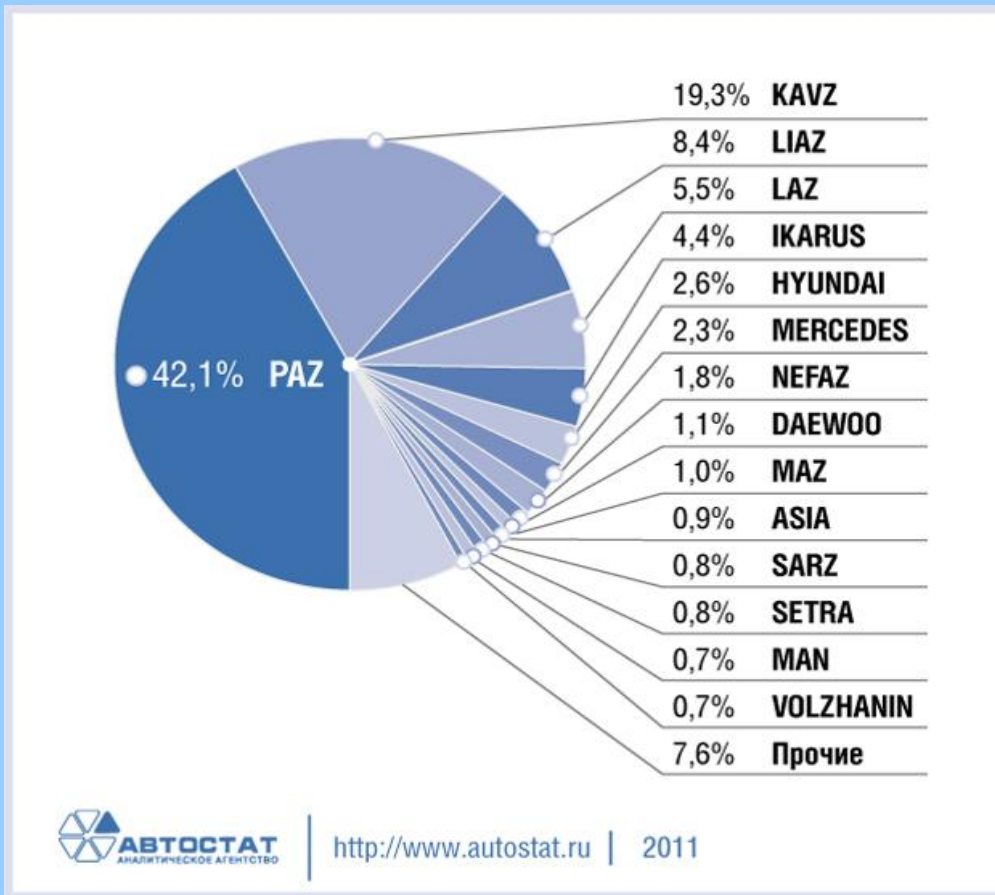
## 90% of trucks in Russia are domestically produced (Jan 2011)



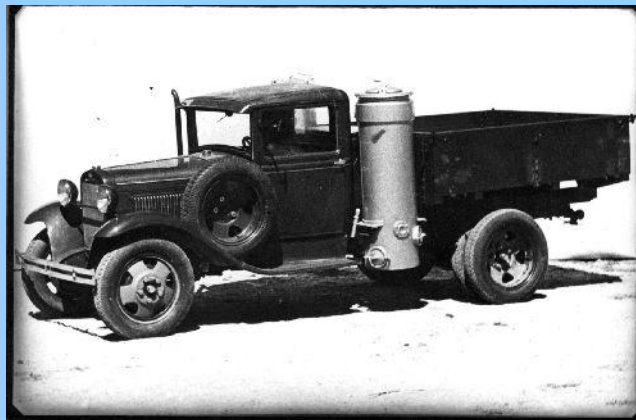
Foreign producers account for 7.8%



## 75% of Russian buses are produced domestically (Jan 2011)



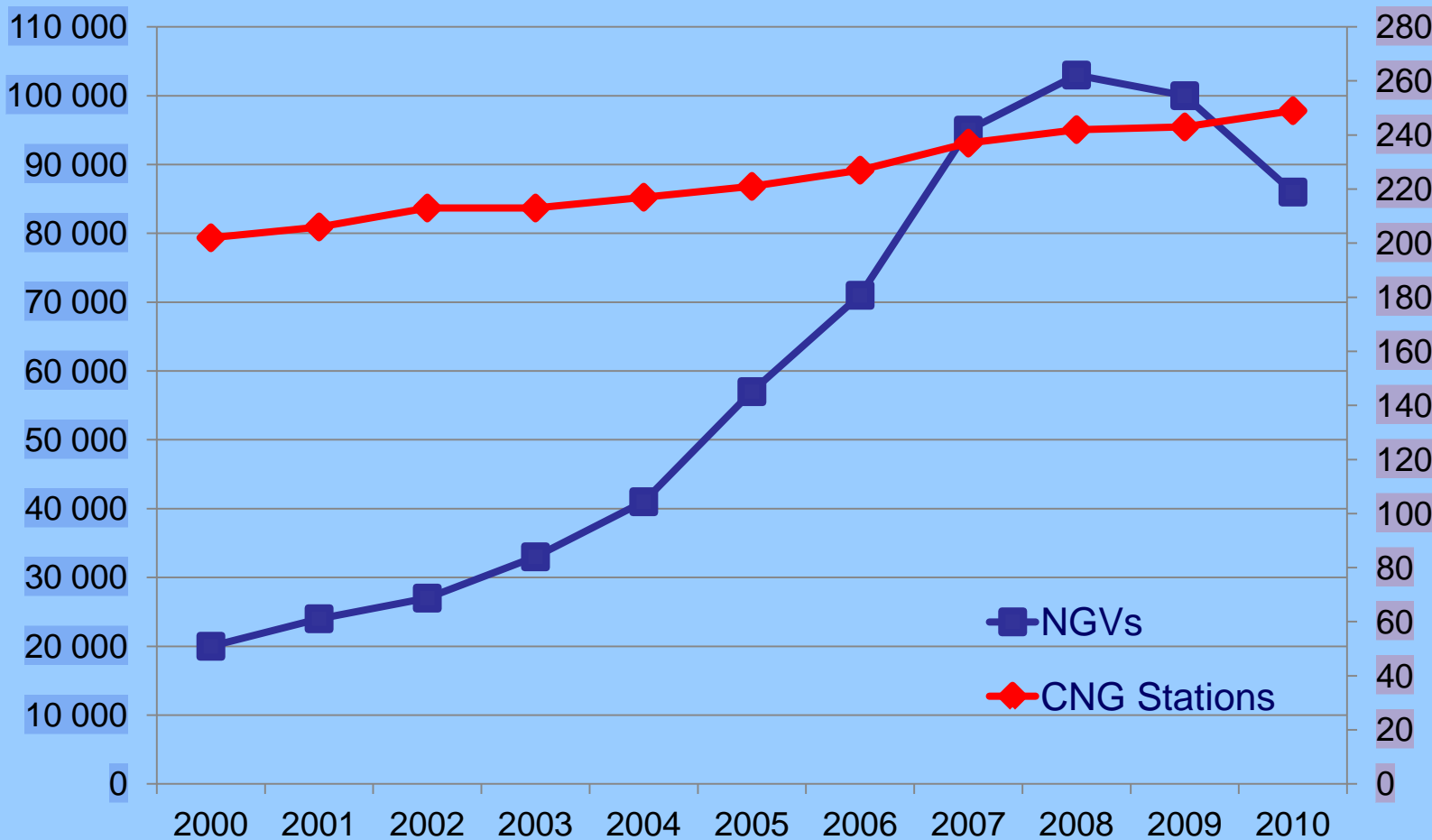
- The very first CNG filling station was built in 1937 not far from Dnepropetrovsk city on the northern coast of the Azov sea
- The NGV history of Russia started in the 20<sup>th</sup> century. At that time the Soviet government developed the first national NGV program, targeted to build 500 NGVs



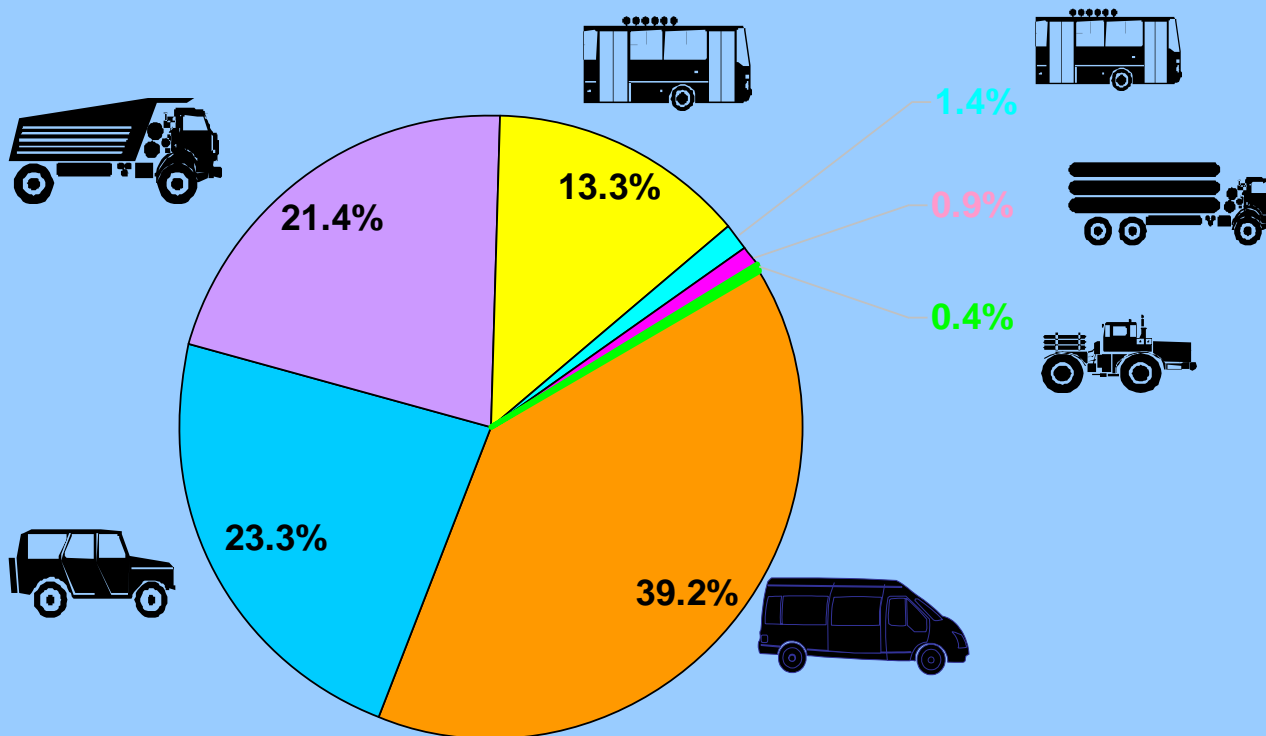
Source: <http://www.ngvrus.ru>



## NGV growth peaked in 2008 while fuel stations remain relative stable



The Russian NGV fleet today is composed of 86.000 vehicles: commercial vehicles are the majority. Only 23% are passengers cars



Natural gas in the transport sector, Eugene Pronin, Conference on Innovative Uses of Gas, Brussels, 24 June 2011

## European OEMs are cautiously looking at market entry opportunities

- Daimler established joint venture with KAMAZ and Natural gas trucks are on the agenda
- IVECO is retailing small numbers of their CNG Daily
- SCANIA has demonstrated one CNG bus
- VW was talking about assembling CNG cars in Russia, but those talks ended without further action



## Only one Russian company, Kamaz, offers natural gas buses and trucks

- Large range of vehicles from 2 to 20 tons
- General purpose chassis they use for different applications
- Kamaz has its own dedicated natural gas engine
- Currently Westport Innovations seems to be the only supplier trying to penetrate the Russian market
- OEMs typically are willing to produce NGVs only when the market can be proven
- Today KAMAZ is marketing about 15 different models of HD NGVs: general purpose trucks, garbage collection, vacuum vehicles, dump trucks, buses, etc

## Farm tractors and railway locomotives are being actively experimented



First in the World Gas Turbine Locomotive( the GT-1)



The GT-1 being filled with LNG



Natural Gas/Diesel Locomotive filled with LNG



K-7001 CNG Tractor



MTZ-80 CNG Tractor



MTZ-80 LNG Tractor

Source: NGVRUS, July 2011



## New vehicles on LNG

- Russia's government has approved a project to produce hybrid cars running both on conventional gasoline as well as **liquefied natural gas (LNG)** engines, according to Russian billionaire and project motivator, Mikhail Prokhorov
- Prime Minister Vladimir Putin backed the proposal to build a pilot factory with a capacity of 10.000 vehicles in Togliatti
- The hybrid car would cost about US\$ 10.000 with an annual output of 10.000 vehicles; if they produce 100.000 cars, the cost will range within US\$ 7.000 and US\$ 7.500

Quoted directly from press release, GNV Magazine, 12 March 2010

## Big plans for hybrid NGV production

- The joint venture Yo-Avto (Mikhail Prokhorov's Onexim Group and by Yarovit Motors) claim that the trio of natural gas hybrid yo-mobiles (Yo CrossCoupe, Yo Microvan and Yo Furgon) are sold out for ten years. (Pre-orders could exceed the claimed 122.800 that the automaker announced in mid-June)
- According to Yo-Avto, The base price for the hybrids are anticipated to range from 350.000 to 450.000 rubles (US\$ 12.393 to US\$ 15.934)
- The Yo-mobile hybrids anticipate a top speed of 75 miles per hour; a range of 249 miles; and an estimated fuel economy rating of 67 miles per gallon
- Production will commence during the second half of 2012 with output from its St. Petersburg factory initially targeted at 45.000 units a year

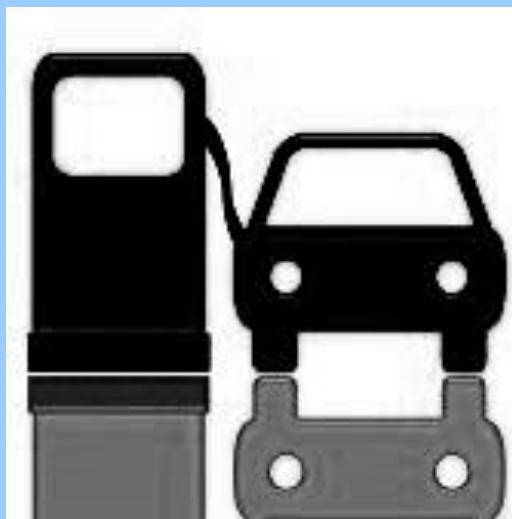




## Vehicle targets & projections have been very optimistic

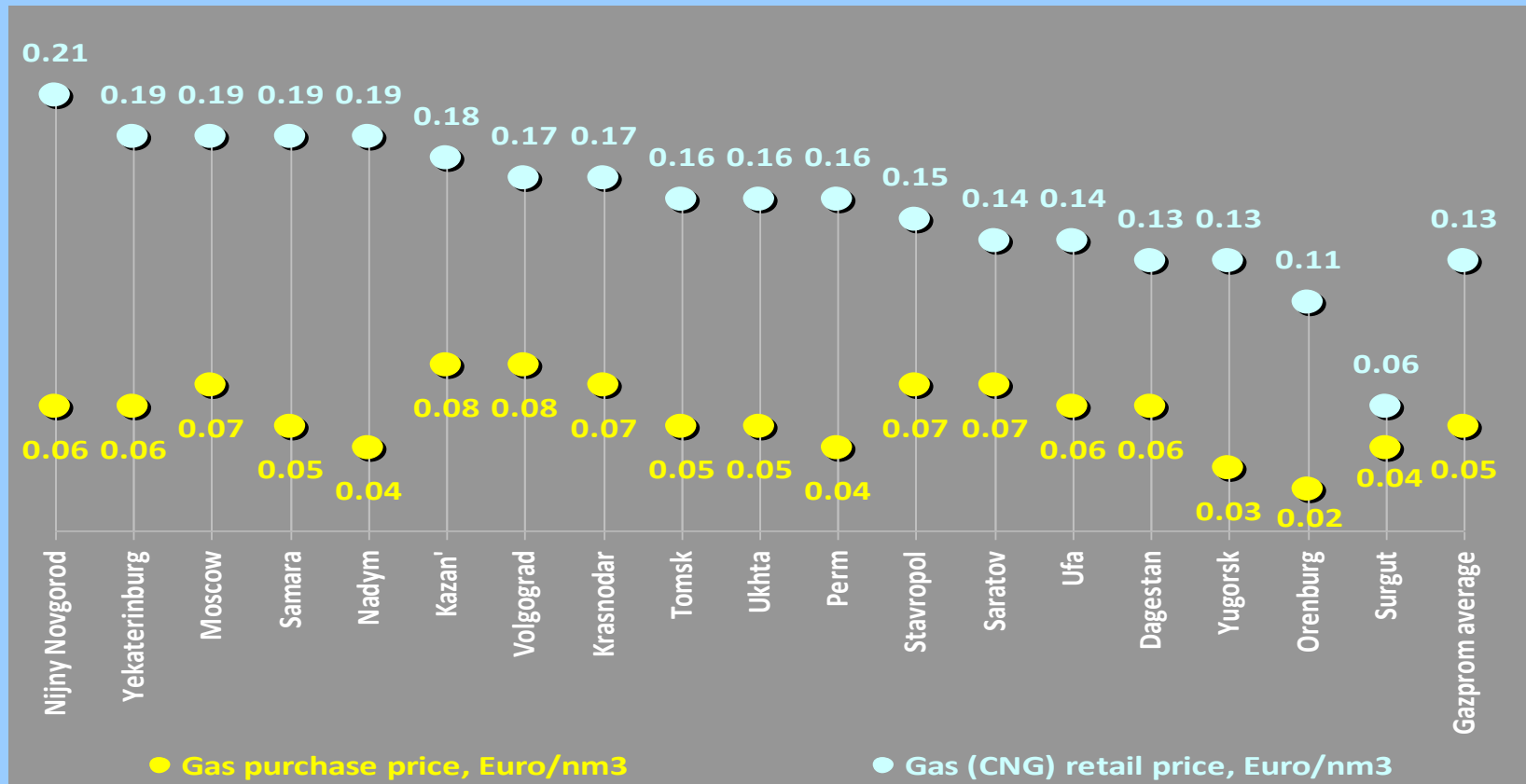
In 2002 the Governmental Commission on gaseous motor fuel adopted a *concept* to use natural gas for transport

- First stage (2003 – 2005): increasing the NGV fleet up to 65,000 - 70,000 vehicles and the construction of 10 - 12 new fuelling stations
- Second stage (2006 - 2010) : 120,000-140,000 NGVs and 200-210 additional fuelling stations
- Third stage (2011 – 2020): increasing the NGV fleet up to 1 million vehicles





## Natural gas price at the pump in 2010: CNG is 2-3 times cheaper than Diesel or Petrol



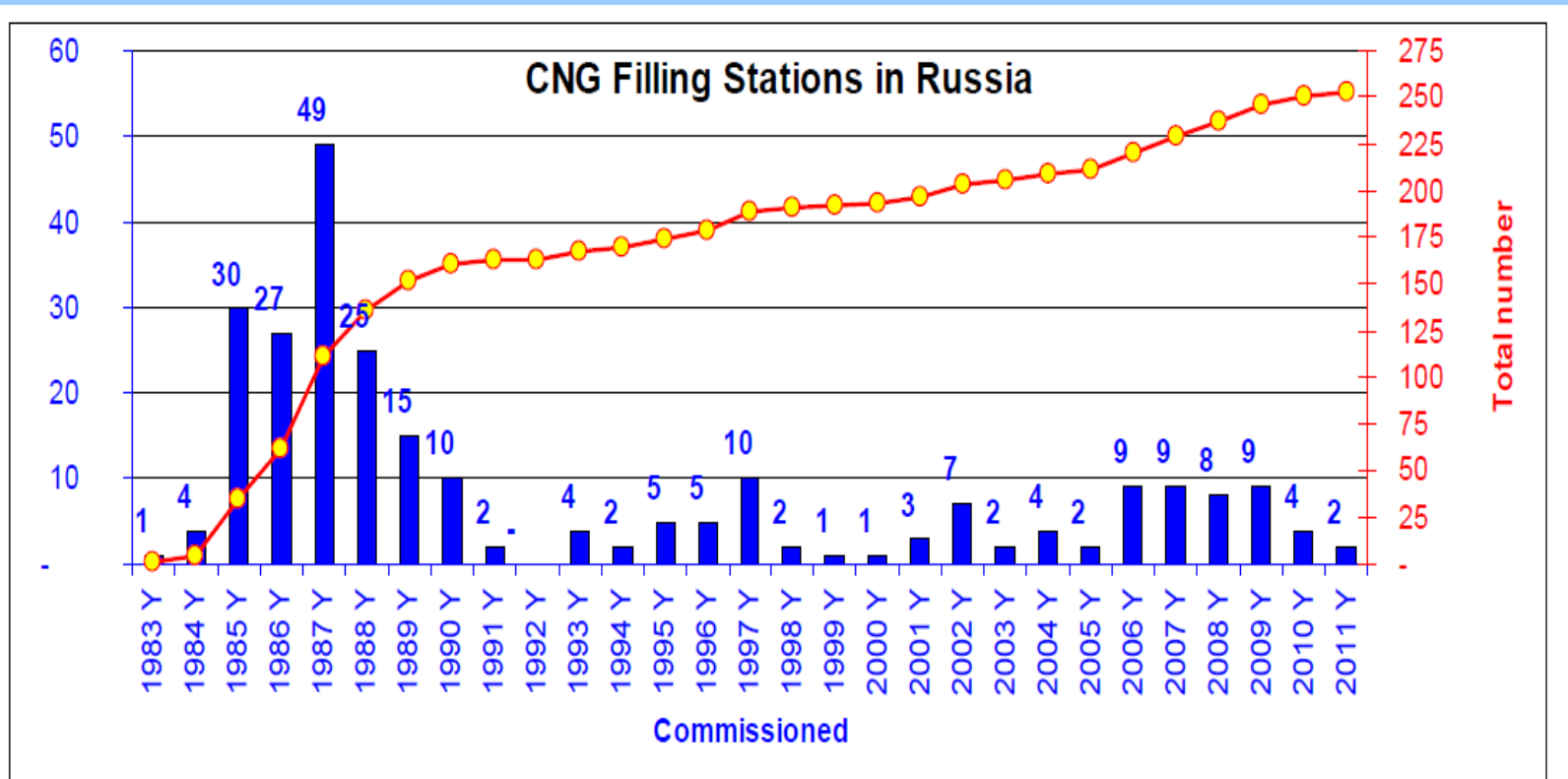
Source: *Natural gas in the transport sector*, Eugene Pronin, Conference on Innovative Uses of Gas, Brussels, 24 June 2011



- Today 249 CNG fuelling stations operate in 59 Russian regions serving 172 cities
- In 2010 NGVs consumed 345 million cubic meters of natural gas
- CNG price is limited; cannot be higher than 50% of the cost of low grade petrol (resolution n31, 15/1/1993)
- Aim for 1,000 fueling stations by 2020
- Numbers of CNG filling stations and vehicles in Siberia are significantly lower than in European Russia; Far East district has no CNG filling stations



## Construction of CNG filling stations had the biggest increase during the 1980s



Source: Gazprom, NGV Division

## Gazprom to double Russian CNG station population

- Gazprom plans to double the number of natural gas filling stations in the country by 2011. It aims at the installation of 200 more stations



Source: Asian NGV Communications, January 2011, pag 16



There are only two companies installing compressor stations in Russia

- **Greenfield** has replaced three large existing CNG stations (since 2007)
  - **Bauer** has refurbished another 2 stations
- Compressor companies doing business in Russia must have their equipment recertified about every three or four years. The total cost can be around €40.000







- Multi-fuel stations: **allowed**
- No limits on opening hours
- Self service: **allowed** but there has to be an attendant (cashier/operator)
- Payment practices at the pump: Cash; company fuel cards; long term contracts. Credit cards are not accepted yet

Visa International has introduced "Fleet cards" as a first step on the way to use



- **STA GTO-1-97** - Gas Vehicle Association Standard. Gas Fuel Equipment and Cylinders for the Vehicles using Compressed Natural Gas as a Transportation Fuel. General Technical Requirements, Safety Requirements and Testing Procedures  
**STA GTO-2-97** - Gas Vehicle Association Standard. Gas Fuel Mechanisms and Devices for the Vehicles Using Compressed Natural and Liquefied Petroleum Gas as a Transportation Fuel. General Technical Requirements, Safety Requirements and Testing Procedures  
**Draft National Standard** - High Pressure Cylinders for the On-Board Storage of Compressed Natural Gas Used as a Transportation Fuel for Vehicles
- **GOST R 51753-2001** High pressure cylinders for the compressed natural gas as a fuel for automotive vehicles. General specifications
- **GOST R 41.49-2003** Uniform provisions concerning the certification of compression ignition and natural gas engines as well as positive-ignition engines fuelled with liquefied petroleum gas and vehicles equipped with compression ignition and natural gas engines and positive-ignition engines fuelled with liquefied petroleum gas, with regard to the emissions of pollutants



## **GOST approval is the 'passport' to get goods over the border (into Russia)**

- Once GOST approves of the equipment then a second permit is needed called *Rostekhnadzor*, which allows the goods to be put into service
- These are the two fundamental approvals that are required
- Fire protection approval is also required



## Distances between compressors and fuelling dispenser

- Sanitary distances between station and residential building are up to one kilometer: It has (and will) be changed because such a rule excludes CNG business from city limits
- Fire safety distances are acceptable: maximum 35 meters

## Russia's dual gas pricing system: differences between internal and export price

Domestic natural gas prices are regulated by the Russian Federation Act on Natural Gas Supply (1999):

- Gas prices should be indexed to their pre-reform levels (i.e., prices prior to 1990)
- Encourage the domestic use of natural gas
- Low domestic prices for natural gas from 1990 until the present (price differential of approximately \$16–\$76 per ton of standard fuel compared to prices charged in the European export market)
- Delayed its gas price reform program to a new target date of 2015



## Commission for Natural and Liquefied Petroleum Gas Vehicles

- Established in 1994 by Government of the Russian Federation, the Commission includes representatives of leading ministries and departments
- In 2003 an identical Commission was set up by the Russian Gas Society. The Commission comprises representatives of governors of the Russian Federation constituents
- The Commissions are primarily responsible for the decision-making and recommendations on legislative, organizational and sci-tech aspects surrounding the conversion of motor vehicles and agricultural equipment to natural gas

## Long term socio-economic development of the Russian Federation to 2020

Directive No 1662-R, 17 November 2008

- Stimulation of the use of natural gas as a motor fuel
- Natural gas is one of the priorities of Chapter 6, 'Development of the energy infrastructure and building up of energy efficiency of the economy'

## Priorities for the Russian government to 2012

Directive No 1663-R, 22 November 2008

- Instructs the Government to prepare Federal energy saving program
- Introduced innovative energy efficient technologies and develop NGV-related incentives

## Russian Federation Transport Strategy until 2030

Directive No 1734-R, 22 November 2008

- Reducing the harmful impact of transport on the environment and ensuing damage requires
- promoting the use of transportation vehicles powered by alternative fuels (non-petroleum fuels)

## Government action to help the imports of foreign vehicles

- Recognizing the need for foreign-made trucks, the government lowered import duties on trailers to 5 percent and on semis to 10 percent

Source: [http://russianamericanbusiness.org/web\\_CURRENT/articles/615/1/Automobile-market-in-Russia-2010](http://russianamericanbusiness.org/web_CURRENT/articles/615/1/Automobile-market-in-Russia-2010)

## Introduction of CNG in Moscow

- Moscow Municipal government passed the Resolution n 553 "State of the Works and Further Measures to Promote the Use of Compressed Natural Gas as a Motor Fuel for the Automotive transport of Moscow", June 2010
- Aim: Reduce CO<sub>2</sub> atmospheric emissions by 22 million m<sup>3</sup>

## Resolution 553 of June 2010 to develop NGV in Moscow

- Social facilities shall be served by Euro-4 vehicles or CNG vehicles.
- Electrical and CNG trucks vehicles will be exempt from the ban to enter the central area of Moscow
- Communal vehicles in the central area of Moscow shall use alternative fuels (CNG, electric power)
- Multifuel filling stations in Moscow, where CNG make no less than 30% of the overall fuel sales, and automotive companies, where no less than 50% of the fleet are vehicle powered by alternative fuels (CNG and electric power) may get at least 5 year land tax holidays
- Six Moscow bus companies will be using CNG
- 21 sites are approved for construction CNG filling stations
- Filling stations without CNG options will not be allowed in Moscow





## **Gazprom is the main actor involved in the natural gas sector**

- The world's largest gas company engaged in production, transmission, processing and marketing
- 17% of global market, 83% of Russian market
- 670.600 Km of transmission & distribution pipelines
- 50,01% owned by Russian Government
- Several projects to develop NGVs and CNG fuelling stations



## Gazprom has the biggest NGVs fleet in Russia

- As of December 31, 2007 Gazprom has 28,500 different general purpose vehicles in the company
- 18.6% (5.300) of them are NGVs





## **Other independent gas companies (not fully owned by Gazprom) are focused on sectors other than NGV**

Gas producing oil companies like TNK/BP, Lukoil and gas suppliers such as Itera and Novatek:

- Their prices are not regulated: they can charge any price that the market will find acceptable
- Almost completely dedicated to the power and industrial sector



## Gazprom's focus is on developing the NGV fuelling infrastructure\*

- Gazprom believes that gas industry **MUST** lead the creation and development of the CNG filling stations network
- CNG stations **MUST** come first: that is why Gazprom began a corporate program to build 200 CNG stations
- Gazprom will not be investing in vehicle conversion or OEM NGVs acquisition for third parties. Municipalities or private vehicle operators shall do it themselves

\*Communications w/E.Pronin,  
NGVRUS



## Gazprom “Targeted Comprehensive Program” is focused on growth

Years	2007	2008	2009	2010 - 2015	TOTAL 2007 - 2015
New CNG filling stations (start of the project)	6	14	20	160	200
Total capacity, Mm <sup>3</sup> /year	43,6	54,6	75,4	519,1	692,7
Mobile refueling units	16	16	10	48	90
Total capacity, Mm <sup>3</sup> /year	17,6	17,6	11,0	52,8	99,0
Conversion and cylinder requalification shops	-	13	5	22	40
New jobs	36	197	175	1 214	1 622
At CNG filling station	36	84	120	960	1 200
At Conversion and cylinder requalification shops	-	65	25	110,0	200
At Mobile refueling units	48	48	30	144	222
New conversions, thousands NGVs	1,1	4,7	6,4	38,2	50,4
Natural gas consumption by NGVs at new stations, Mm <sup>3</sup>		11,9	41,3	1 858,0	1 911,2
Diesel and gasoline displacement, thousand tons	14,9	51,9	119,8	322,6	509,2
Emissions reduction, thousand tons (CO equivalent)	6,0	20,8	48,2	129,6	204,6



## Gazprom takes an active role with KAMAZ to make more NGVs available

- Joint work over the federal law “On the use of gas motor fuels” improving the legal base for the production and use of CNG and LNG for vehicles
- Use of CNG and LNG vehicles for the needs of the gas industry
- Joint-organization authorized maintenance centers and repair of KAMAZ gas vehicles based on Gazprom’s subsidiaries
- Conduct joint scientific and technical events on CNG
- Participation in the programs of the gasification of transport in regional/municipal programs and sports/social projects
- Creation of new CNG and LNG technology for the natural gas vehicle industry, including multi-purpose chassis and mobile refuelling stations

Source: NGVRUS, 19 July 2011



## Gazprom/KAMAZ agreement signed in mid-July 2011

- Development program for the use of gas fuel in the Sverdlovsk region
- Aimed at bringing about economic efficiency of the transport system while reducing environmental impact

Source: NGVRUS, 19 July 2011



## Alexei Miller, CEO of Gazprom: “Develop a network of CNG filling stations all across Europe”

“I would like to announce Gazprom’s new initiative. We are offering our European partners to consider together a project to set up an extensive network of natural gas filling stations in Europe with Gazprom’s participation ... There is no any real alternative for the use of hydrocarbons at present or in the next decades”

Alexei Miller, CEO of Gazprom, 2008



## Alexey Miller Defines Gazprom's Commitment to CNG

“We plan to promote the development of the European market of natural gas fuel, increase efficiency and popularity of projects related to the creation of a European network of fueling stations. ... We believe that the theme of NGV must take its rightful place in the debate on the future European energy sector, to which we are called upon at the outset. Gazprom is going to do its utmost for the future of NGV vehicles.”

Alexei Miller, CEO of Gazprom, 2011

“Blue Corridors” is a well-known, studied concept but no action has been taken to create the reality



Project "**Blue Corridor**" is designed by non-governmental Environmental Facility Vernadsky with the support of Open Society "Gazprom" and the assistance of the UNECE





## Doing business in Russia is highly bureacrattized

- Large bureaucracy that has to be dealt with to get equipment into the country, certified for use, and then recertified to continue doing business
- Procedures are lengthy

Source: The Heritage Foundation, 2011 Index of economic freedom



## Encouraging outside investment and trade by NGV equipment suppliers is difficult

- Prohibitive tariffs, services market barriers, import and export restrictions, non-transparent regulations and standards, discriminatory licensing, complex and non-transparent customs valuation and administration, subsidies, corruption, and weak enforcement of intellectual property rights add to the cost of trade

Source: The Heritage Foundation, 2011 Index of economic freedom



**The general business environment, particularly for foreigners, is challenging**

- Burdensome regulations continue to hinder private-sector development
- The regulatory system suffers from corruption and a lack of transparency
- Bureaucratic obstacles and inconsistent enforcement of regulations inject considerable uncertainty into entrepreneurial decision-making and are a particular problem for small businesses

Source: The Heritage Foundation, 2011 Index of economic freedom





- Personal relationships and onsite presence is required to business effectively in Russia  
(compressor station supplier)
- There is almost no ‘government support’ for the NGV market. A lot is said about environmental and economic advantages of gas, but very little is done  
(NGV stakeholder in Russia)

- Energy environment
- Gas industry support
- Government support
- NGV market development
- Legal and regulatory framework for CNG station development
- Investment environment

## Energy Environment

- Favourable fuel price differential (natural gas is 70% cheaper than gasoline) provides an economic incentive
- Russia has abundant supplies *and* reserves of natural gas to fulfil any level of demand in the vehicle sector

## Gas Industry Support

- Stronger, more definitive marketing activities are needed to encourage consumer support for NGVs
- The plans for NGV development need to be implemented to achieve the ambitious targets for NGV and fuelling station growth

## Government Support

- The federal government has expressed its support for NGV market development but few incentives are in place to motivate the market
- More government actions are needed to support their generally favorable view of NGVs
- Subsidies or tax reductions on conversions and refuelling station construction (and refurbishment) would send a very positive signal to consumers and OEMs
- Development of customer-friendly financial programs would help



## NGV Market Development

- Strategic implementation of government's stated policies and gas industry targets will positively influence NGV market development
- Upgrading of old CNG stations and construction of new stations is needed using contemporary standards. This also will help improve the image of NGVs
- Development of full service stations would (CNG + LPG + gasoline + diesel + car wash + NGV maintenance & conversion shop)
- Without OEM product, there is a relatively open and receptive market for foreign NGV systems (vehicles and stations)



## Legal and regulatory framework for CNG station development

- Streamlining the bureaucracy involving the importation of fuel station (and other) equipment would increase interest of suppliers and, likely, the pace of fuel station development
- Use of international standards (or adapting GOST to them) would reduce constraints and facilitate infrastructure development
- Use of internationally accepted recertification procedures (i.e. using Notified Bodies) would reduce the cost of doing business for station suppliers

