



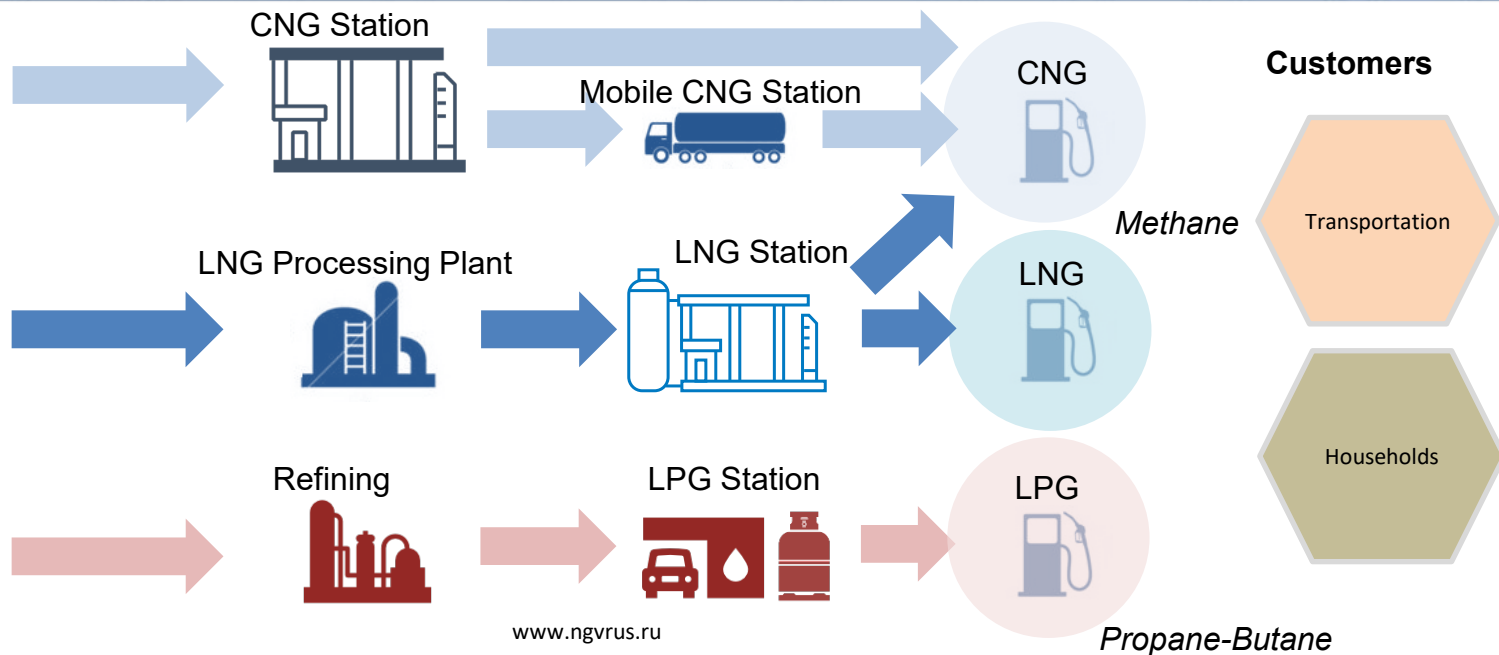
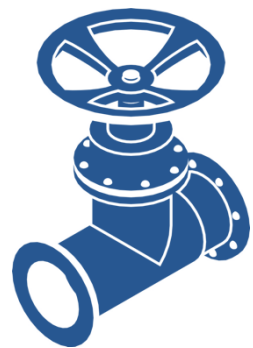
Support measures for NGV market in Russian Federation

Natural Gas Vehicles Association of Russia

Vasily Zinin



Alternative Gas fuels: production chains





Why is methane priority alternative fuel in Russia?

International context

- Russia is a global leader for natural gas reserves
- Changing environment of global gas market
- Pricing mechanism (local natural gas price is regulated and does not depend on foreign markets)

Economy

- CNG is 3 times cheaper than gasoline and diesel fuel
- There are not any prerequisites for declining gasoline prices
- Methane cannot be stolen from the vehicle

Ecology




- Lower sulfur and nitrogen compounds emissions, and CO₂ emissions as well
- Absence of PM emissions that absorbs harmful substances and causes diseases
- No fuel spills during transportation and storage

Social policy

- Option to hold tariffs for passenger transportation
- Increasing competitiveness of Russian goods by reducing logistics costs
- Methane is attractive cheap alternative fuel for households

Structure of NGV market

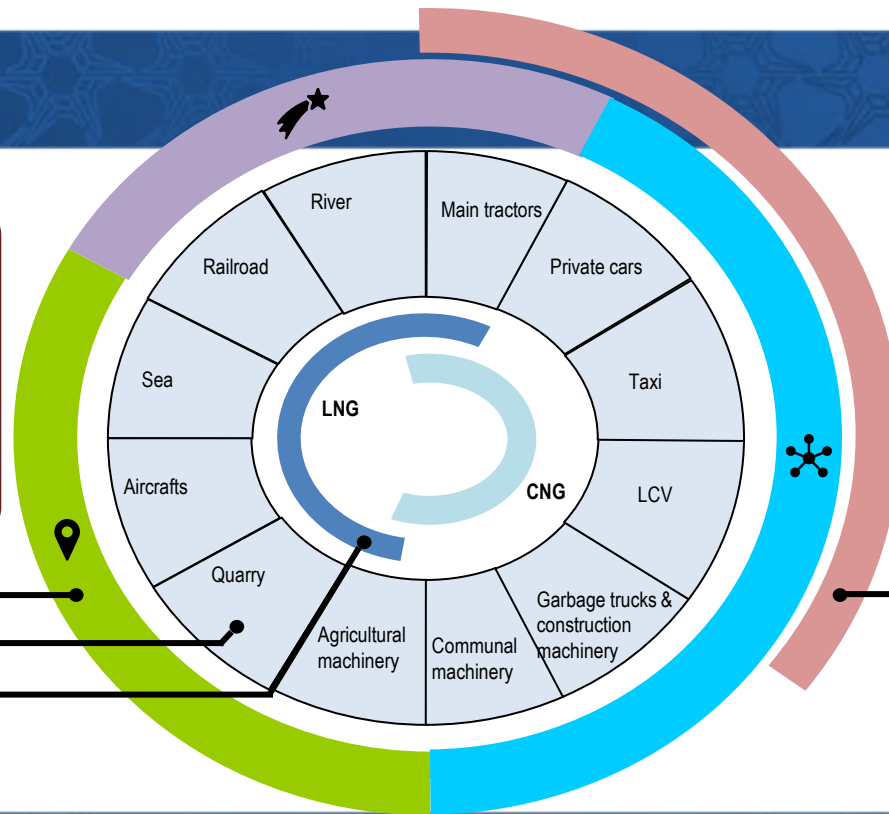
Types of infrastructure development:

-  Network – covers city area with limited logistics routes
-  Trunk – covers main logistics routes between cities and regions
-  Point – for local infrastructure with limited logistics (seaport, career or agricultural ground)

Type of infrastructure

Market segment

Type of fuel



Historically CNG infrastructure grows firstly, then it comes LNG-segment.

In case of complex approach for regional development, multi-fuel approach should be used to get synergy and cover all segments.

Zone of subsidizing

Nowadays main governmental support measures relates to road transport



NGV market volumes

There are 587 facilities of gas filling infrastructure in the Russian Federation today, while 364 of them belong to the Gazprom Group

587

Total number of gas filling infrastructure facilities in the territory of the Russian Federation



364

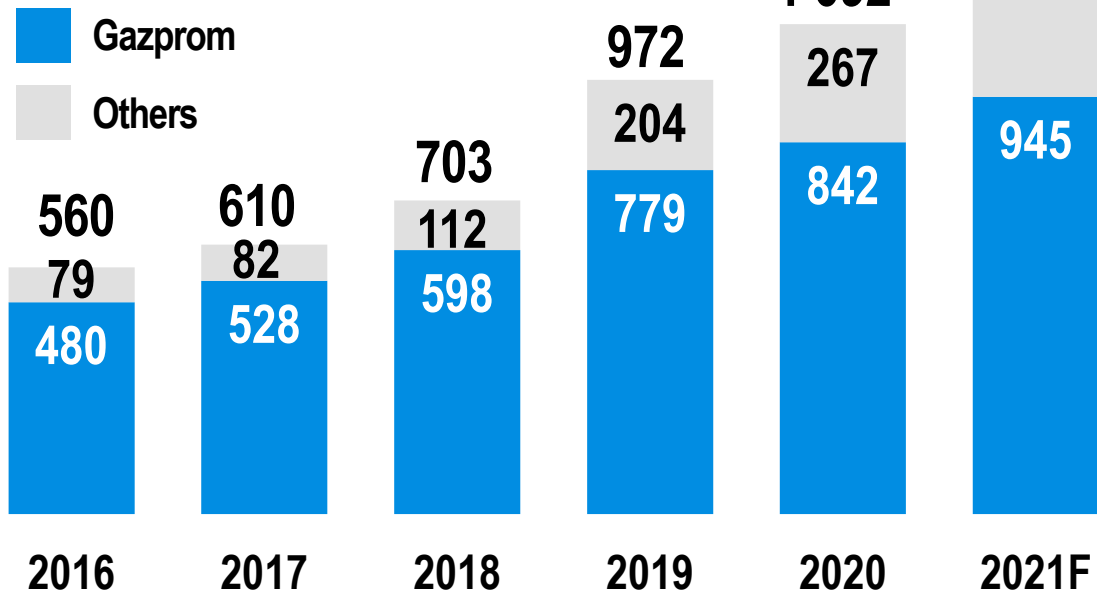
Gas filling infrastructure facilities belong to Gazprom Group



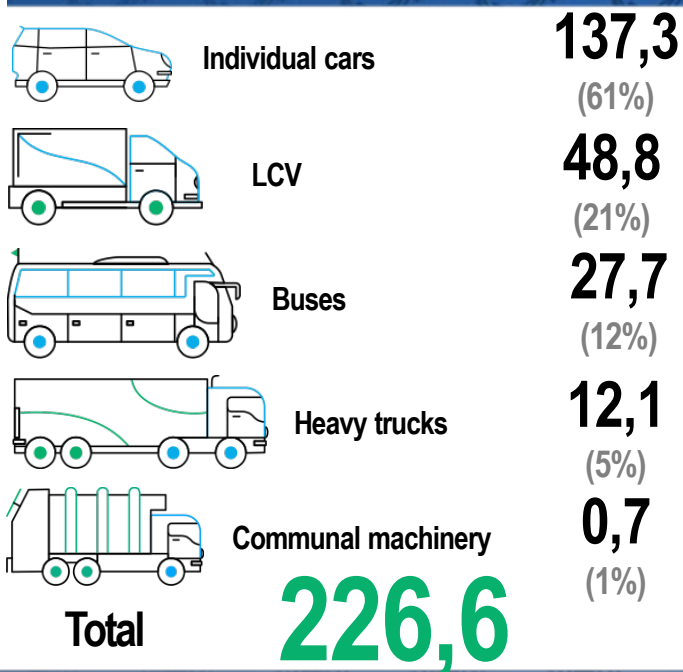
NGV market statistics

NGV Sales Volumes

mcm

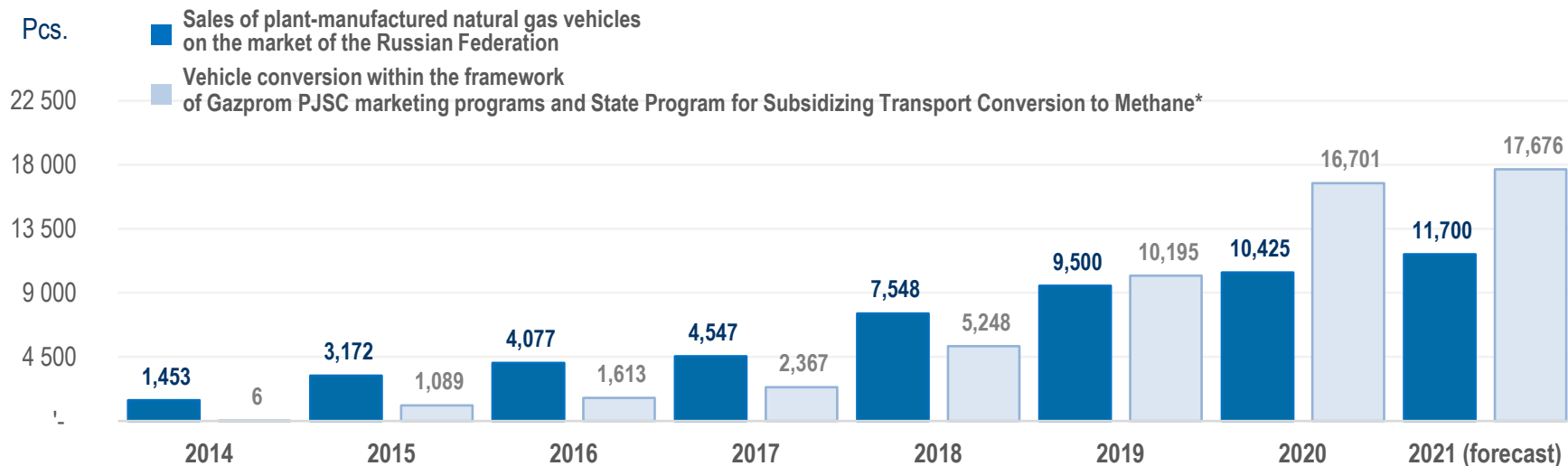


NGV fleet structure, thousands





NGV fleet dynamics



Концерн
Тракторные заводы





Emerging market problem



MINISTRY OF ENERGY
OF THE RUSSIAN FEDERATION



27 «*пilot*»
regions

Coordinating role of
regional authorities





KEY ACTIVITIES FOR NGV MARKET DEVELOPMENT



INFRASTRUCTURE

EXPANDING GAS FILLING INFRASTRUCTURE

- Stationary infrastructure
 - Mobile infrastructure
- Servicing terminals, bunkering

CONSUMERS

STIMULATING DEMAND FOR GAS ENGINE FUEL



- Demand promotion measures
- Marketing programs
- Promotions
- Subsidization



VEHICLE FLEET

EXPANDING NATURAL GAS VEHICLE FLEET

- Expanding production and range of plant-manufactured vehicles
 - Vehicle conversion to natural gas

LEGISLATION


INTERACTING WITH GOVERNMENT AUTHORITIES





- Updating the industry regulatory environment
- Expansion of market state support measures
- Promotion of sectoral interests when interacting with federal and regional authorities



Support of the Russian Government

 **GAS ENGINE FUEL MARKET DEVELOPMENT SUBPROGRAM**

 Subsidies for construction of CNG and LNG gas filling infrastructure facilities


 Subsidies for vehicle conversion


2019–2020 2021–2024

5.6
billion rubles

14.3
billion rubles

EXPECTED EFFECTS

 **2.72** bcm Consumption of natural gas as gas engine fuel in 2024

 **1,273** Number of GEF retail facilities in 2024

 **TRANSPORT MACHINE PRODUCTION SUBPROGRAM**

 Subsidies for vehicle manufacturers

5.8
billion rubles

9.9
billion rubles

EXPECTED EFFECT

 **40,010** Number of natural gas vehicles manufactured from 2019 to 2024



Financial Support for Market Players

Supply Side

30% refund for CNG station CapEx
(for 27 regions)

0,6-0,8 mln USD for LNG station located
on the main highways



Demand Side

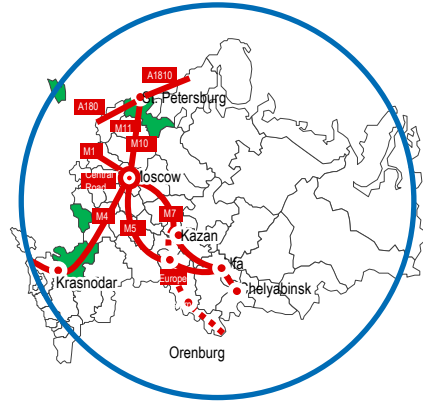
60% refund for CNG retrofit cost

Subsidizing the price difference
between gasoline and NGV models
produced in Russia





Plans of infrastructure development



27 SUBSIDIZED REGIONS

- | | |
|----------------------------|-------------------------------|
| 1. Belgorod region | 15. Perm Territory |
| 2. Vladimir region | 16. Republic of Adygea |
| 3. Volgograd region | 17. Republic of Bashkortostan |
| 4. Voronezh region | 18. Republic of Tatarstan |
| 5. Moscow | 19. Rostov region |
| 6. St. Petersburg | 20. Saratov region |
| 7. Krasnodar Territory | 21. Stavropol Territory |
| 8. Kursk region | 22. Tver region |
| 9. Leningrad region | 23. Tula region |
| 10. Lipetsk region | 24. Udmurt Republic |
| 11. Moscow Region | 25. Ulyanovsk Region |
| 12. Nizhny Novgorod region | 26. Chelyabinsk region |
| 13. Novgorod region | 27. Republic of Chuvashia |
| 14. Oryol Region | |

5 REGIONS WITH ACCELERATED DEVELOPMENT OF GAS ENGINE FUEL MARKET

1. Rostov region
2. Belgorod region
3. St. Petersburg
4. Leningrad region
5. Kaliningrad region

10 KEY HIGHWAY PROJECTS

1. M-10 Russia
2. M-11 Neva
3. M-4 Don
4. M-1 Belarus
5. M-7 Volga
6. M-5 Ural
7. Central Circular Road
8. A-181 Scandinavia
9. A-180 Narva
10. Europe – Western China International Transport Highway





Effect of NGV market development

ECONOMY EFFECT
(TRUCK TRACTOR CASE STUDY)

Average fuel price
in 2020.

Fuel consumption
per 100 km

Fuel costs per 1
km

NATURAL GAS

0.26 \$/M³

48.1 M³

0.12 \$

DIESEL

0.65 \$/L

37 L

0.24 руб.



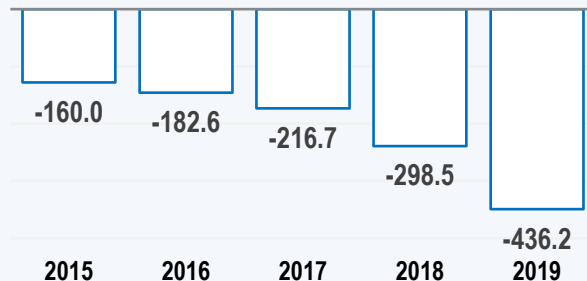
11 383.68 \$
Fuel costs economy
per 100 000 km

ECONOMY EFFECT

REDUCING FUEL COSTS

-1,29 bln \$

million \$



2024 г.

-4,08 bln \$

2030 г.

-13,53 bln \$



Thank you for attention!

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