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Overview of Natural Gas Sector in Serbia

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1.0. Energy activities in natural gas sector

- Natural gas transport, natural gas transportation system operation, storing of natural gas, natural gas storage operation, gas distribution, operation of distribution pipelines, trade in natural gas (trade for captive consumers) . These are *activities of public interest* (while trade on free market is not), monitored by the Government and the Energy Agency;
- For distribution company to perform activity of public interest the prerequisite is to obtain assignment contract by the Government as well as a license by the Energy Agency;
- License is issued for the existing distribution network, based on the reports of the competent bodies, establishing the fulfillment of technical, energy and other conditions for performance of energy related activities.

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2.0. Methodologies and tariff systems

- In August 2006, AERS laid down and published the following methodologies for the determination of tariff elements for the calculation of:
 - Transportation system access and use prices
 - Distribution system access and use prices
 - Natural gas prices for tariff buyers (wholesale and retail)
(1. draft of Methodology for natural gas storage was prepared)
- In February 2007., AERS laid down and published methodologies for setting criteria for determination costs of connection to the transportation and distribution system for natural gas.
- In December 2006, AERS laid down and published the following tariff systems:
 - Tariff system for the calculation of transportation system access and use prices
 - Tariff system for the calculation of distribution system access and use prices
 - Tariff system for the calculation of natural gas prices for tariff customers (wholesale and retail)
(1. draft of Tariff system for natural gas storage was prepared)
- In May 2008., AERS laid down and published new methodologies for setting criteria for determination costs of connection to the transportation and distribution system for natural gas.

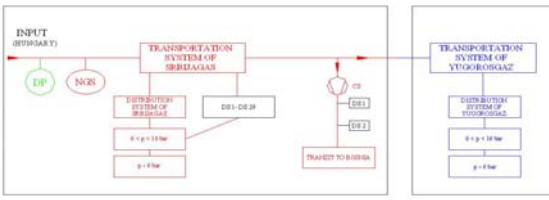
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3.0. NATURAL GAS MARKET STRUCTURE

- One input point to Serbian Transport
- NIS Naftagas, produce natural gas from about 110 wells.
- Natural gas storage, Srbijagas is owner
- Srbijagas transmission lines, length 2140 km, operating pressure in input point 43 bar
- Transit to Bosnia and Herzegovina, lines along the direction Horgos-Batajnica 30" and Batajnica - Zvornik , total length about 300 km
- Compressor station in Batajnica 4400 kW
- Yugorosgas transmission lines, length 67,5 km,
- Distribution pipeline, total lenght 10.500km.
- The priority investment:
 - underground Natural gas storage Banatski Dvor
 - main gas pipeline Nis- Dimitrovgrad



3.1. Natural Gas Market Structure (1)



Technical features natural gas storage

The priorities for the Serbian natural gas sector is to develop storage to relieve the seasonal import capacity constraint.

- Location: Banatski Dvor
- Type: Exhausted gas field
- Gas preparation: Dehydration by three ethylene glycol
- Number of wells: 10 in first phase, 20 in second phase
- Installed capacity:
 - I phase 400 million m³ (mcm)
 - II phase 800 mcm
- Injection capacity I phase:
 - min 1 mcm/day, max 3.5 mcm/day
- Production capacity I phase :
 - min 1 mcm/day, max 5 mcm/day
- Pressure maximal (bar): input 165 bar, exit 140 bar
- Pressure minimal (bar): input 110bar, exit 90 bar
- Working pressure: input 26 bar, exit 45 bar
- Well productivity: max 0,55 mcm/day, min 0,3 mcm/day
- Compressor station 2674 kW, two-stage piston compressor powered by gas motor

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4.0. Companies

- Only **one TSO** for the whole transportation system: public company Srbijagas
- Only **one wholesale supplier** that imports all the quantities needed (100% of total captive customers demand)
- **Two transmission companies:**
 - Public company Srbijagas
 - Yugorosgas (joint stock company with Srbijagas 25%, Centrex 25% and Gazprom 50% ownership)
- There **33 distribution companies**, 29 with the licence, 4 in procedure of licencing, which perform operation of distribution system, and natural gas trade for captive consumers supply.
 - Public entity Srbijagas: market share in retail market is 84%, until on distribution level it is 72% of retailing.
 - Other 32 retailers has 16% market share.
 - The biggest is Novi Sad gas with less than 4%.

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5.0. SUPPLY SOURCES

- Gas consumption in 2007 was 2.353 million m³ (mcm)
- Estimated gas consumption until 2010, 3.1 billion m³
- Domestic gas production in 2007. was 186 million m³ (8%)
- Dominant importation of Russian gas 2.132 mcm (92%), 35 mcm from Hungary
- Wholesale supplier imports all quantities needed (100% of total captive customers demand)
- The existing Hungarian import contract does not provide sufficient capacity to meet peak winter demand (for Serbia- 11 mcm/day, 10,5 mcm/day as a firm and 0,5 mcm/day as an interruptible capacity, for Bosnia - 1,85 mcm/day for Serbia, 1,5 mcm/day as a firm and 0,35 mcm/day as an interruptible capacity)
- Srbijagas perform transit gas for Bosnia and Herzegovina, which provide covering 100% Bosnia supplies.
- Uneven gas consumption dynamics
- Required gas storage for 25-30% annual consumption

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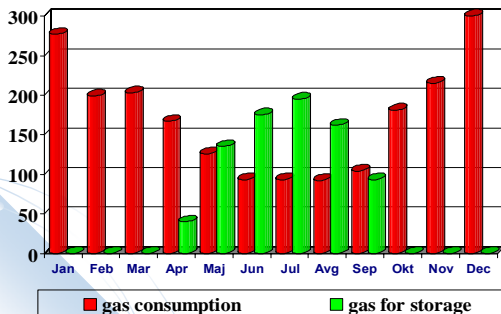
National consumption

Quantities for 2007. (million m ³)		
1	Residential	251
2	Commercial	192
3	Industrial	1.338
4	Power Generation	88
5	District Heating	469
6	Injection in UGS	15
Total		2.353

Note: (m³) - Cubic meter of natural gas of lower caloric value 33.338,35 kJ at 288,15 K (15°C) and pressure 1,01325 bar

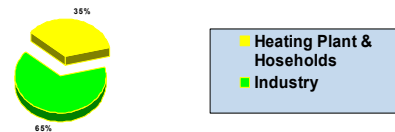
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Monthly gas consumption in 2007.



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The Heating Plant and Household share in yearly gas consumption in Serbia

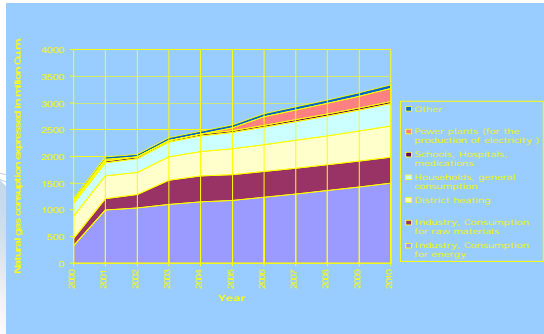


In 2007, it was delivered 43.4% of total consumption customers for customers directly connected to the transportation system.

According to the energy balance sheet for 2008, total natural gas consumption is predicted to be 2,570 bcm - 2,390 bcm of which is imported, while 0,180 bcm is from domestic production (8%).

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Natural gas demand forecast for the period 2000-2010



6.0. Market opening

- According to Energy Law AERS determines the minimum yearly consumption of natural gas necessary to obtain the eligibility status.
- Initial eligibility threshold set by the Energy Law was 50 million m³/year (50% market opening).
- In 2008, Council of AERS passed a decision by which all non household customers could obtain eligibility regardless of annual consumption and went further than the requirements imposed by the Treaty establishing the Energy Community by giving the possibility to obtain eligibility to households consuming more than 50.000 m³/year.
With this eligibility threshold the possible market opening is 88%.
- Only one natural gas customer has eligibility status, but actually they did not change his supplier.

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7.0. Issues in gas sector

- Insufficient gas quantity in system in winter period:
 - 1) Limitation in capacity because the existing Hungarian import contract does not provide sufficient capacity to meet peak winter demand.
 - 2) Natural gas storage is not in function yet.
 - 3) Missing compressor station.
- In order to fully implement European directive 1775 Ministry of Energy should modify existing Energy Law.
- Installed metering devices between the two transportation companies are inadequate, and because of that, losses on the transportation system cannot be exactly determined.
- Declared losses on different distribution networks (33 in total) vary in range from 1% up to 20% (!). Networks also have very different life stage and technical characteristics (some are old and made of steel, some are new and made of polyethylene).
There is no legislation in place regarding this issue.
There are no specific rights of the Agency to prepare any kind of legislation about the losses.

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8.0. Applicable Laws in gas sector

- Energy Law
- Law on foreign investments
- Company Law
- Law on State-owned enterprises and activities of public interests
- Concession Law
- Law on pipeline transportation of liquid and gaseous hydrocarbons

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Thank you for your attention!

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