STATE ENERGY REGULATORY COMMISSION - BULGARIA

Presentation of natural gas energy sector in Bulgaria

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Commissioner

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May 18-24, 2002

Newark, New Jersey – Washington, DC, U.S.A.

1. General overview of natural gas sector

- Pipelines and branch pipelines - 3 060 km
- 10 Compressor stations - 190 MW total capacity
- 170 Gas reduction stations - all over the country
- The annual capacity of gas transportation system is 26 billion m^3

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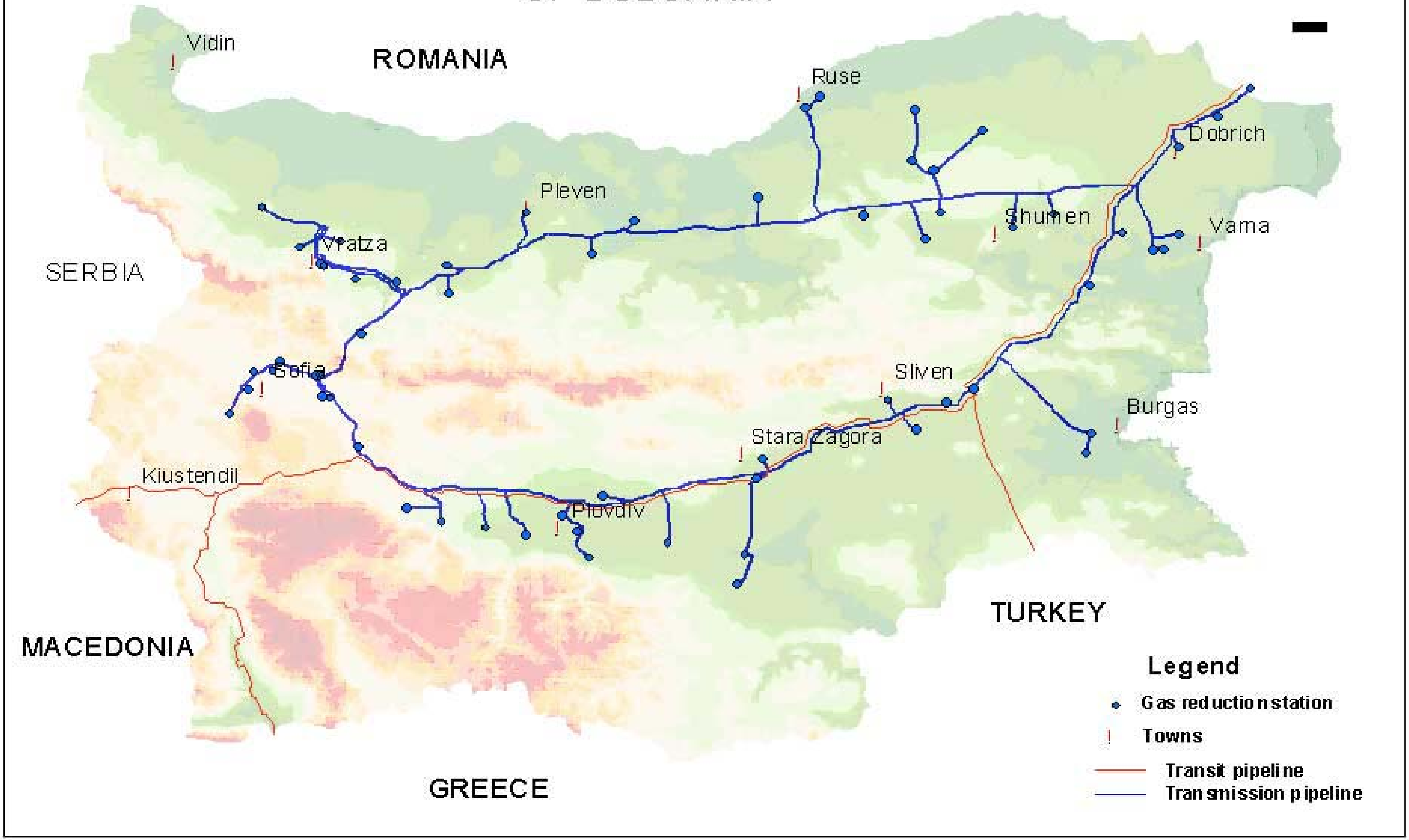
SCHEME OF THE GAS TRANSMISSION AND TRANSIT SYSTEMS OF BULGARIA

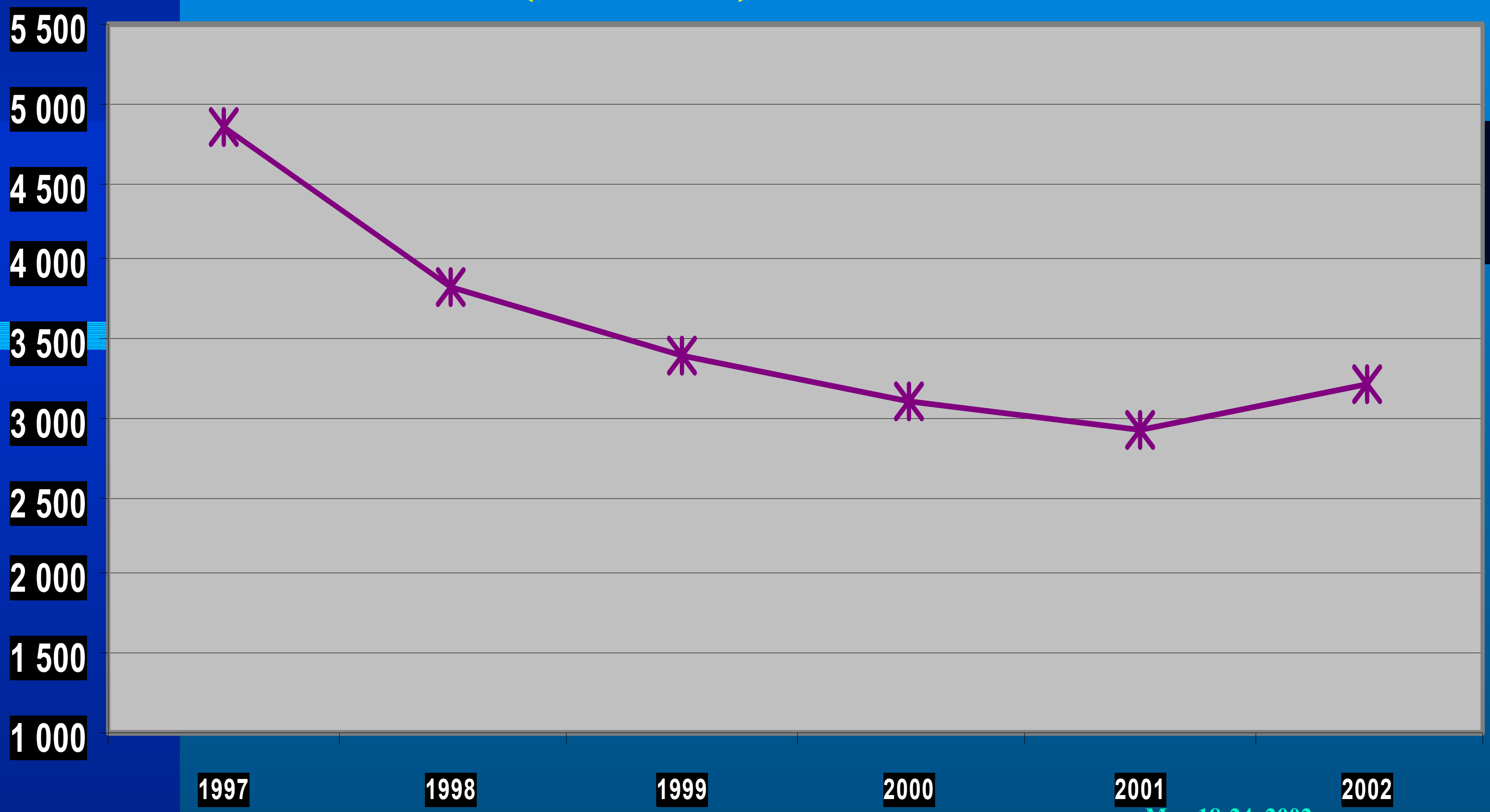


1. General overview of the natural gas sector

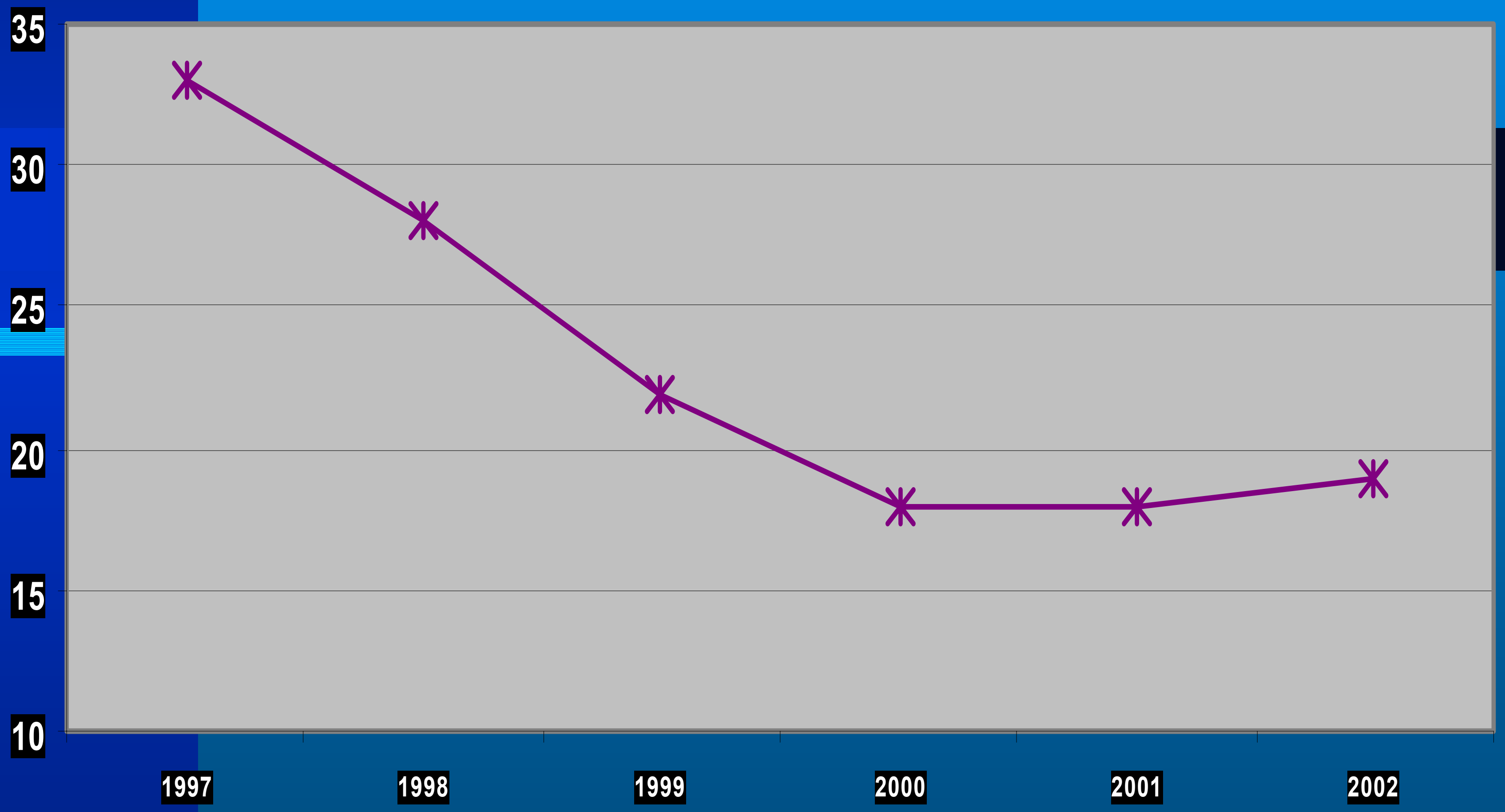
1.1. Import and local production of natural gas in the country during 1997 – 2002 (mil. m^3)

Year	1997	1998	1999	2000	2001	2002*
Import	4 856	3 824	3 381	3 186	3 150	3 200
Production	33	28	22	18	18	19

1.1.Import of natural gas in the country during 1997 – 2002 (mil. m^3)



1.1. Local production of natural gas in the country during 1997 – 2002 (mil. m^3)



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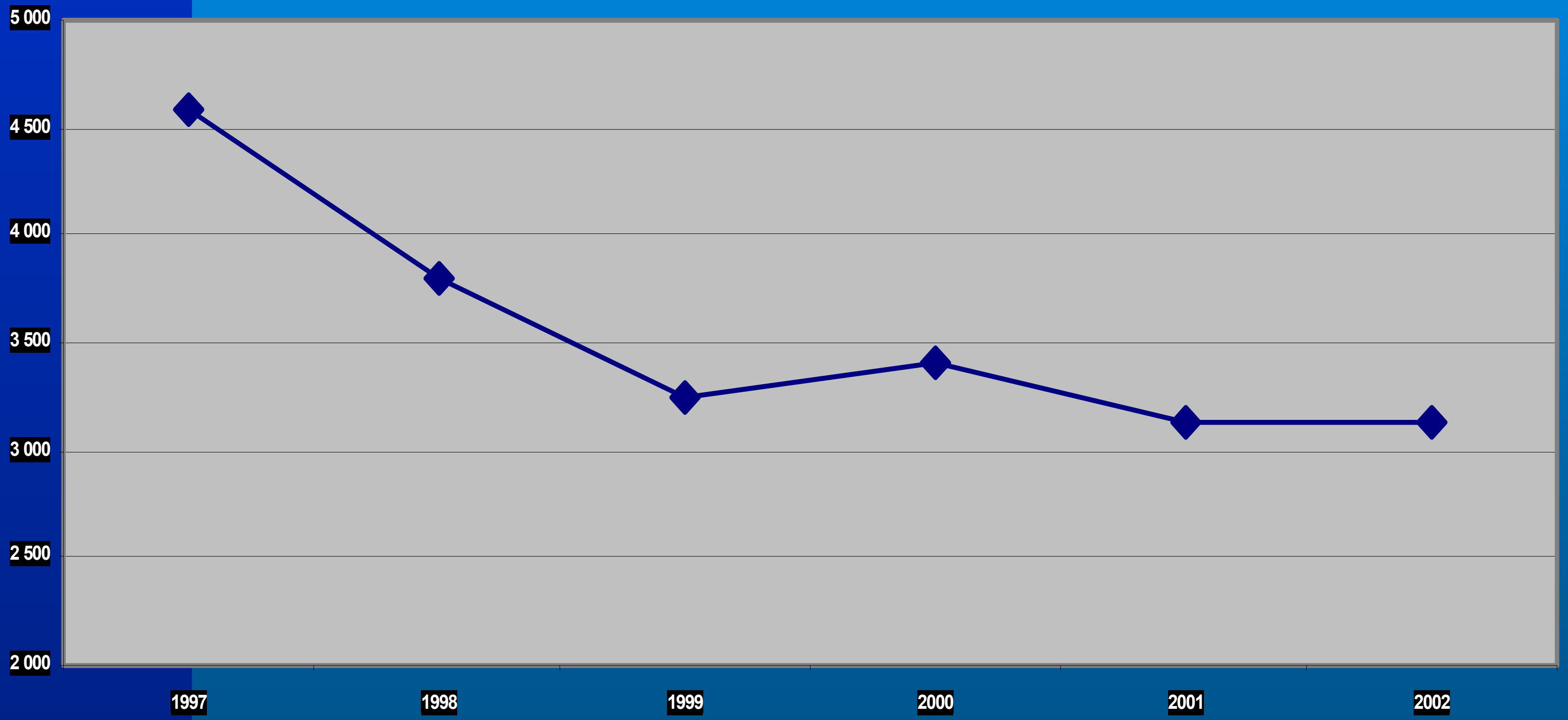
1.2. Transmission and storage

- 2 100 km gas transmission pipelines
- 10 Compressor stations
- The annual capacity of gas supplies system is 9 billion m^3
- Dynamic of natural gas supplies during 1997 – 2002 (mil. m^3)

1997	1998	1999	2000	2001	2002*
4 594	3 791	3 253	3 417	3 140	3 122

Dynamic of natural gas supplies during 1997–2002 (mil. m^3)

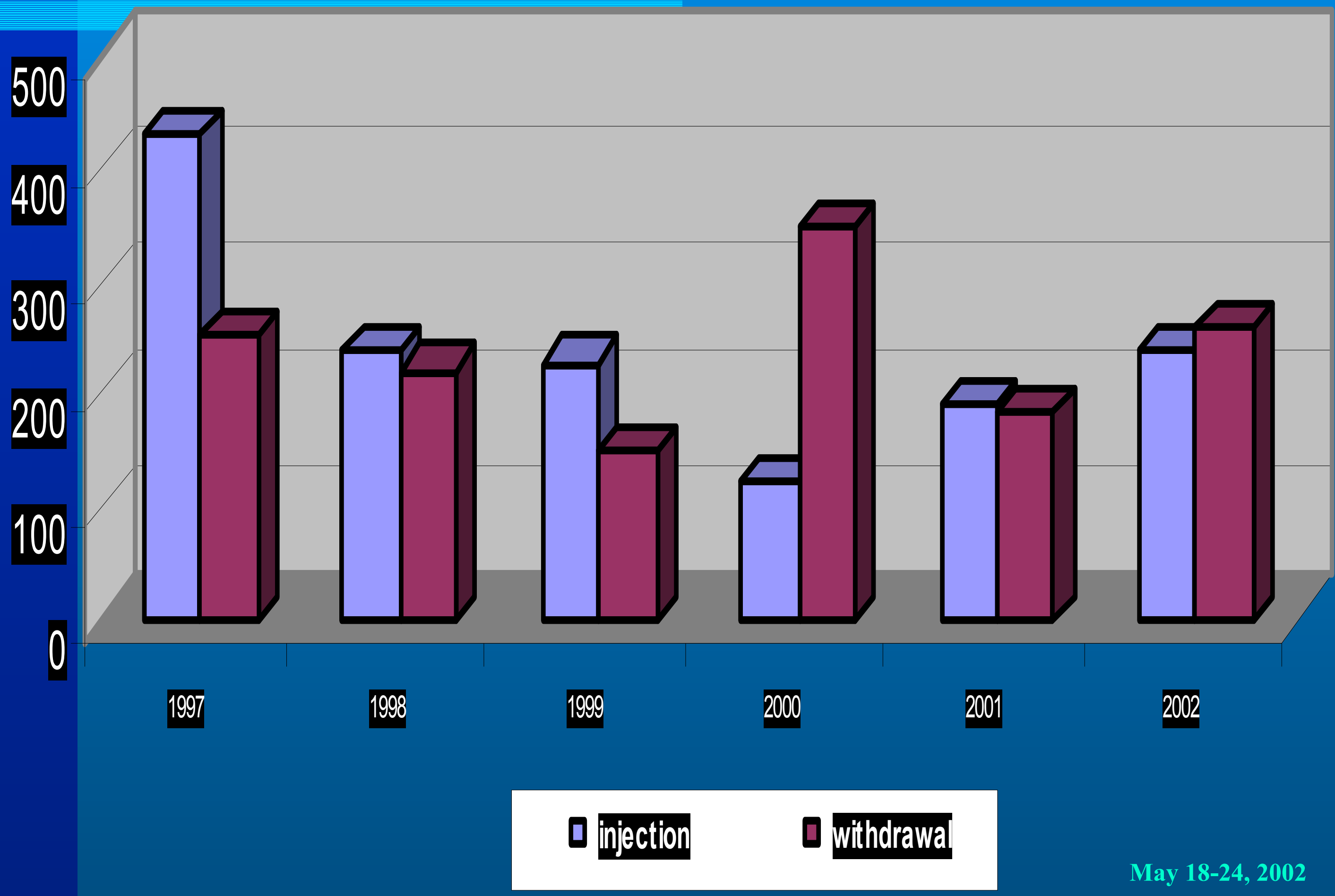


Gas storage

Underground natural gas storage during 1997 –2002 (mil. m^3)

year	1997	1998	1999	2000	2001	2002*
injection	429	238	229	121	194	240
withdrawal	253	222	148	352	184	260

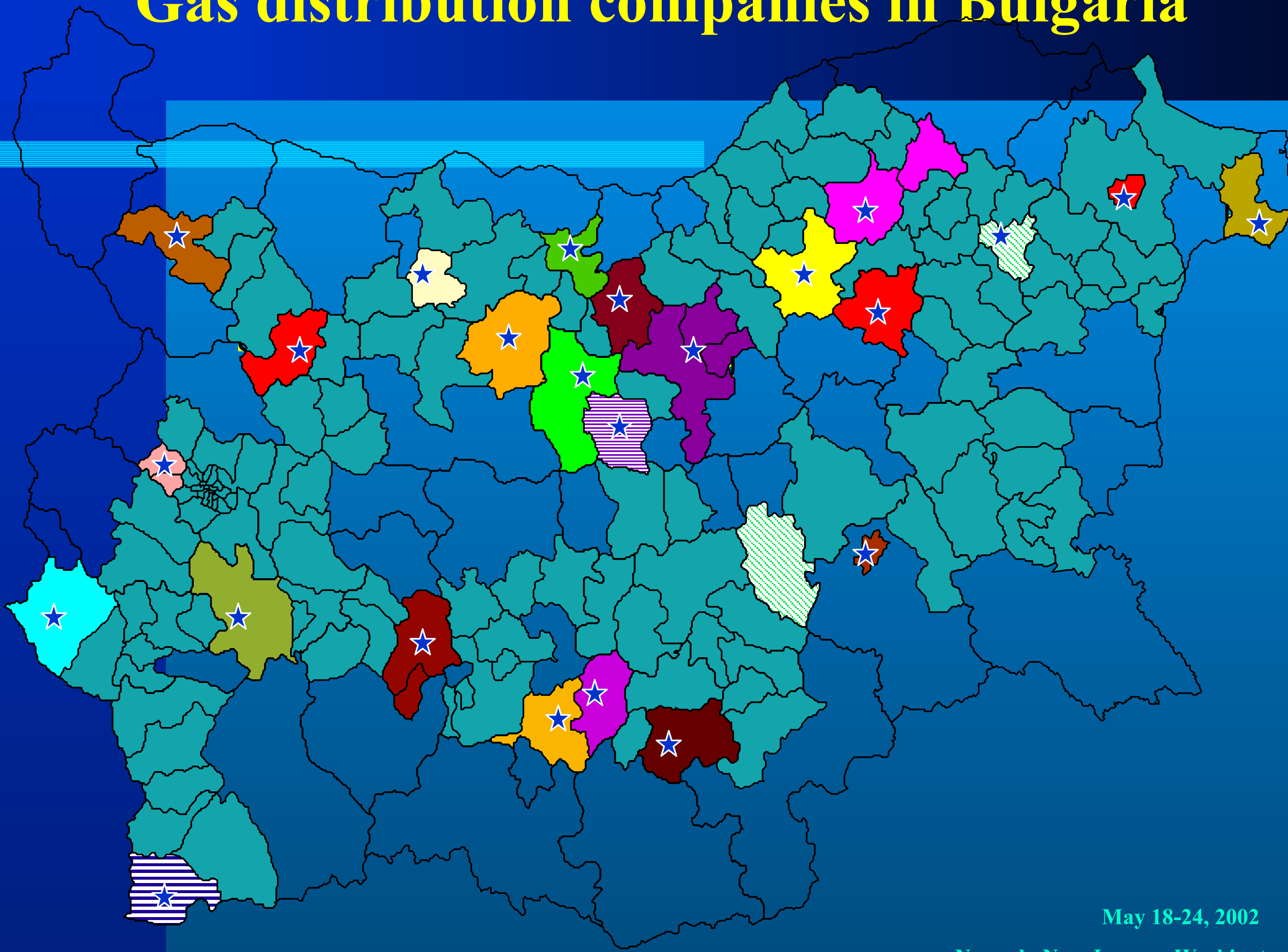
Underground natural gas storage during 1997 –2002 (mil. m^3)



1.3.Distribution gas systems

- **Gas distribution pipelines - 500 km**
- **29 gas distribution companies in 36 municipalities**
- **Small distribution companies – poor investment programs**
- **No connections to the transmission system**

Gas distribution companies in Bulgaria



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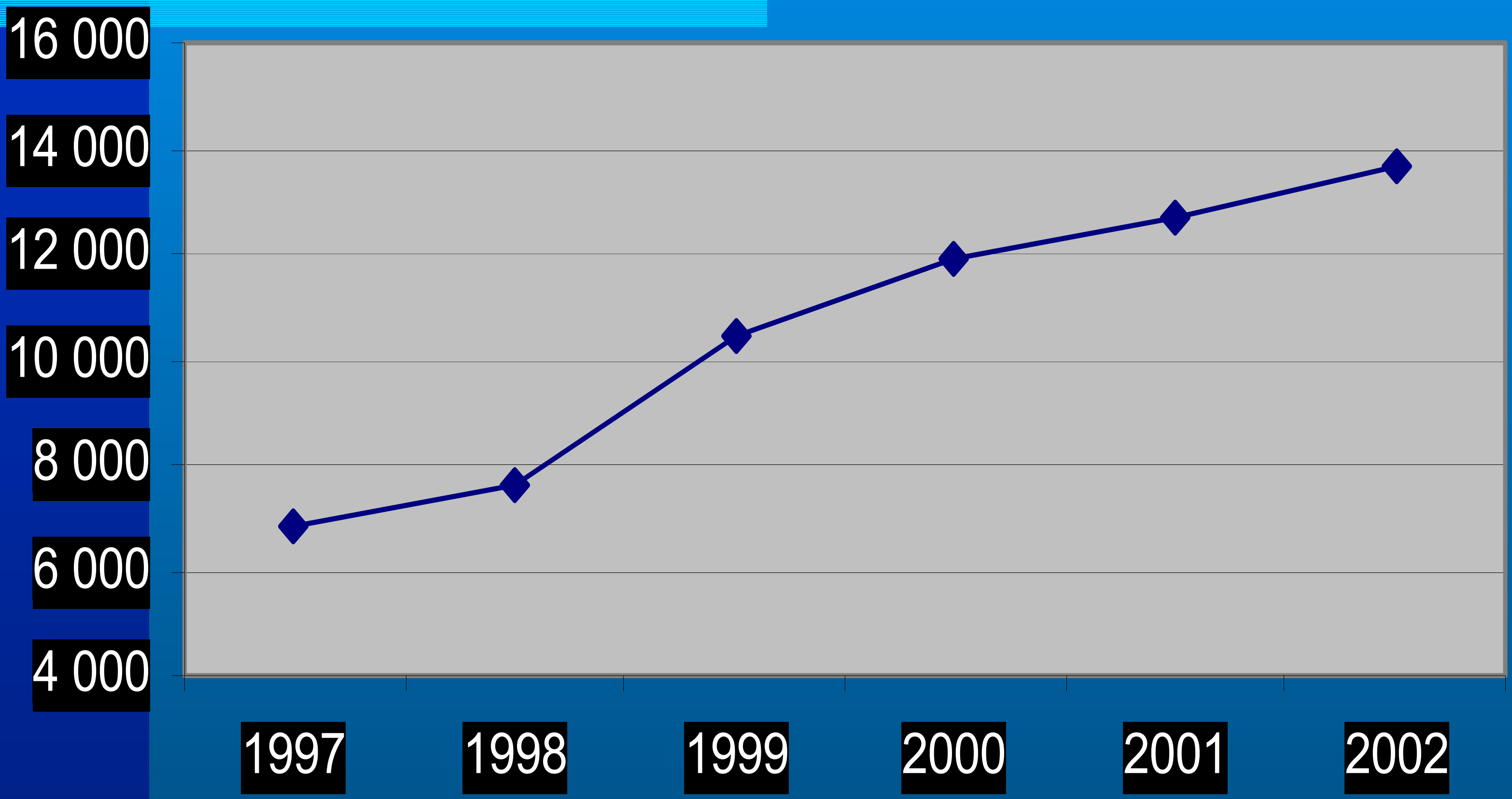
1.4.Transit gas pipelines to other countries

- **Transit to Turkey, Greece and Macedonia**
- **Gas transit pipelines - 960 km**
- **Compressor stations -5**
- **The annual capacity of gas transit system is 18 billion m^3**
- **Dynamic of natural gas transited during 1997 – 2002 (mil. m^3)**

1997	1998	1999	2000	2001	2002*
6 863	7 550	10 415	11 893	12 731	13 700

Natural gas transited during 1997 –2002 (mil. m^3)



2. Market structure

2.1. The Position of “Bulgargas” on the market

2.2 Structure of the consumers

2.3 Distribution market

2.1. The Position of "Bulgargas" on the market

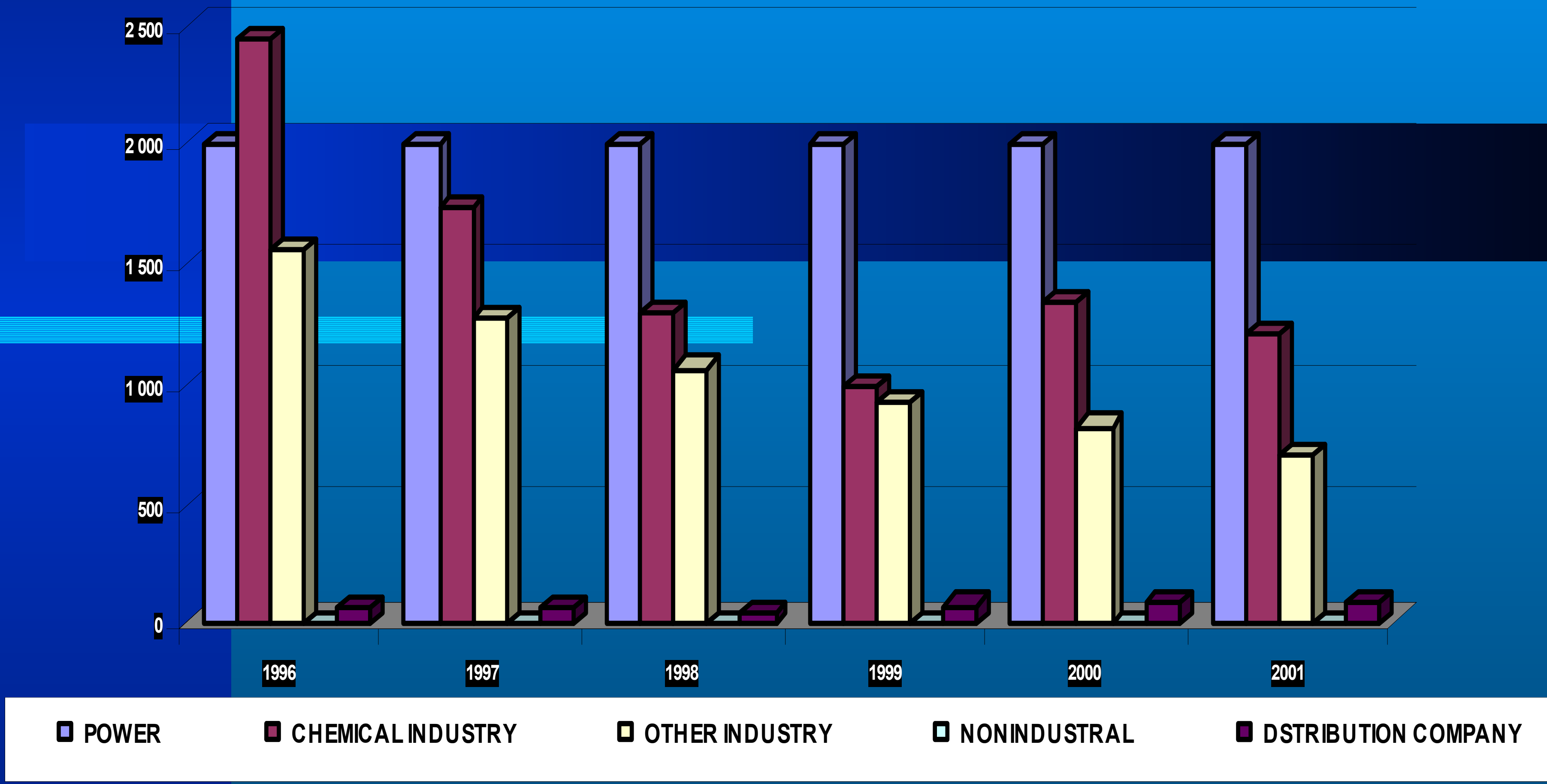
- **"Bulgargas" is a state owned vertically integrated company**
- **Long term (2010) "take or pay" import agreement with "Gasprom"**
- **The only gas supplier to the consumers and gas distribution companies in Bulgaria**
- **Sale 97% of the gas on the market**
- **Owner of transmission system, underground storage and part of distribution system**

2.2.Structure of the consumption

MAJOR CONSUMERS GROUPS

YEAR / CONSUMER GROUP	1996	1997	1998	1999	2000	2001
POWER	1 665	1 524	1 379	1 336	1 167	1 136
CHEMIKAL INDUSTRY	2 435	1 730	1 297	996	1 344	1 214
OTHER INDUSTRY	1 562	1 264	1 064	915	821	694
NONINDUSTRY	7	4	4	3	3	3
DSTRIBUTION COMPANIES	62	72	47	74	82	93
TOTAL	5 731	4 594	3 791	3 324	3 417	3 140

MAJOR CONSUMERS GROUPS during 1997 –2001 (mil. m^3)



2.3 Distribution market

- **Insignificant share of market – 3% from annual consumption**
- **Serve small industry, commercial and residential consumers**
- **Potential gas market forecast at up to 6.6 bcm by 2010 of which 15% is residential/commercial demand**

3. Specific regulatory aspects in natural gas sector

- Licensing of "Bulgargaz" – vertically integrated company
- Licensing of private gas distribution companies
- Economic regulation of natural gas sector
- Access to the gas transmission and gas distribution systems

3.1. Licensing of "Bulgargaz"– vertically integrated company

- License for transmission and storage of natural gas – operator of gas transmission system
- Import of natural gas, regularly supplies payment
- Connection of local gas distribution companies and new consumers
- Problems with non payments from consumers

3.1. Licensing of "Bulgargaz"– vertically integrated company

- Reliability and technical condition of the transmission system
- Short term license for gas distribution to the specific clients
- License for gas transit, investments for increasing the capacity of the system

3.2. Licensing of private gas distributions companies

- After 1999 with the new Energy Low the regime is changed - municipal concessions with regional licensing
- The Investors have a property raids on gas distribution system
- Issued 36 municipal regional licenses of the concessionary companies
- The Gas distribution companies have insignificant share of the market - 3% , in small municipalities with restricted consumption

3.2. Licensing of private gas distributions companies

- Problems with investments and the property raids. Plans for development
- Price policy – the price for distribution is not covering the costs for the middle and small consumers Financial difficulties of the Municipalities
- Competition between the gas and the subsidized central heating and low price electricity

3.2. Licensing of private gas distributions companies

- Lack of experience and standards. Problems with the gas companies management
- Need of simplification of the present procedures for the development of gas networks, connections and indoor installations

3.3. Economical regulation of the gas sector

- Dated April 1, 2002 the State Energy Regulatory Commission confirms the gas prices of the licensed gas companies
- The prices are cost based
- The State Energy Regulatory Commission determines the rate of return of the gas companies' capital and the regulatory period – 8% for the transmission company and 15% for the gas distribution companies

3.3. Economical regulation of the gas sector

- Return of Investment is guaranteed
- Common price of the gas transmission company
- Regional prices of the gas distribution companies
- Normalization of Price levels and differentiation. Elimination of the cross-subsidizing between the consumers groups

3.3. Economical regulation of the gas sector

- Cost analysis and increasing efficiency of the gas companies
- Competition with alternative fuels

3.4. Access to the gas transmission and the gas distribution systems

- Adoption of the secondary legislation - regulated third party access to the gas transmission and distribution systems
- Steps to liberalization of the local natural gas market in compliance with European Directives
- Criteria determination for the eligible consumers – 80 mln. m^3 annual consumption

3.4. Access to the gas transmission and the gas distribution systems

- Market opening – 75% in relation with consumption structure
- Restricted access for the consumers with unsettled payments
- Guarantees for protection of the consumers' interests – regulated transmission prices, market rules, State Energy Regulatory Commission control

4.1. Gas sector development tendencies

- Security of supply and reliability of transmission system
- Restructuring, privatization, liberalization of the market and development of the balanced consumption structure
- Construction of new gas distribution networks
- Enlarging the opportunities for transit of natural gas to neighbor countries

4.1. 1. Security of supply and reliability of transmission system

- Strong dependence on Russia. Long term contract to 2010 – “take or pay”
- Looking for opportunities for diversification of gas supply

1. Import from Turkmenistan, Iran trough Turkey
2. Increasing of the local gas extraction – “Galata” gas field – 2 bcm (0.5 bcm)
3. Connection of the Bulgarian gas transmission system with the European one

4.1. 1. Security of supply and reliability of transmission system

- Enlargement of the gas storage – “Chiren” and construction of new ones
- Investments in maintenance and enlargement of the gas transmission system

4.2. Restructuring, privatization, liberalization of the market and development of the balanced consumption structure

- Unbundling of Bulgargaz accounts and internal restructuring of import, transmission, distribution and transit
- Registration regime for the Import
- Separation of gas distribution activities from the transmission company - equal in rights on the market

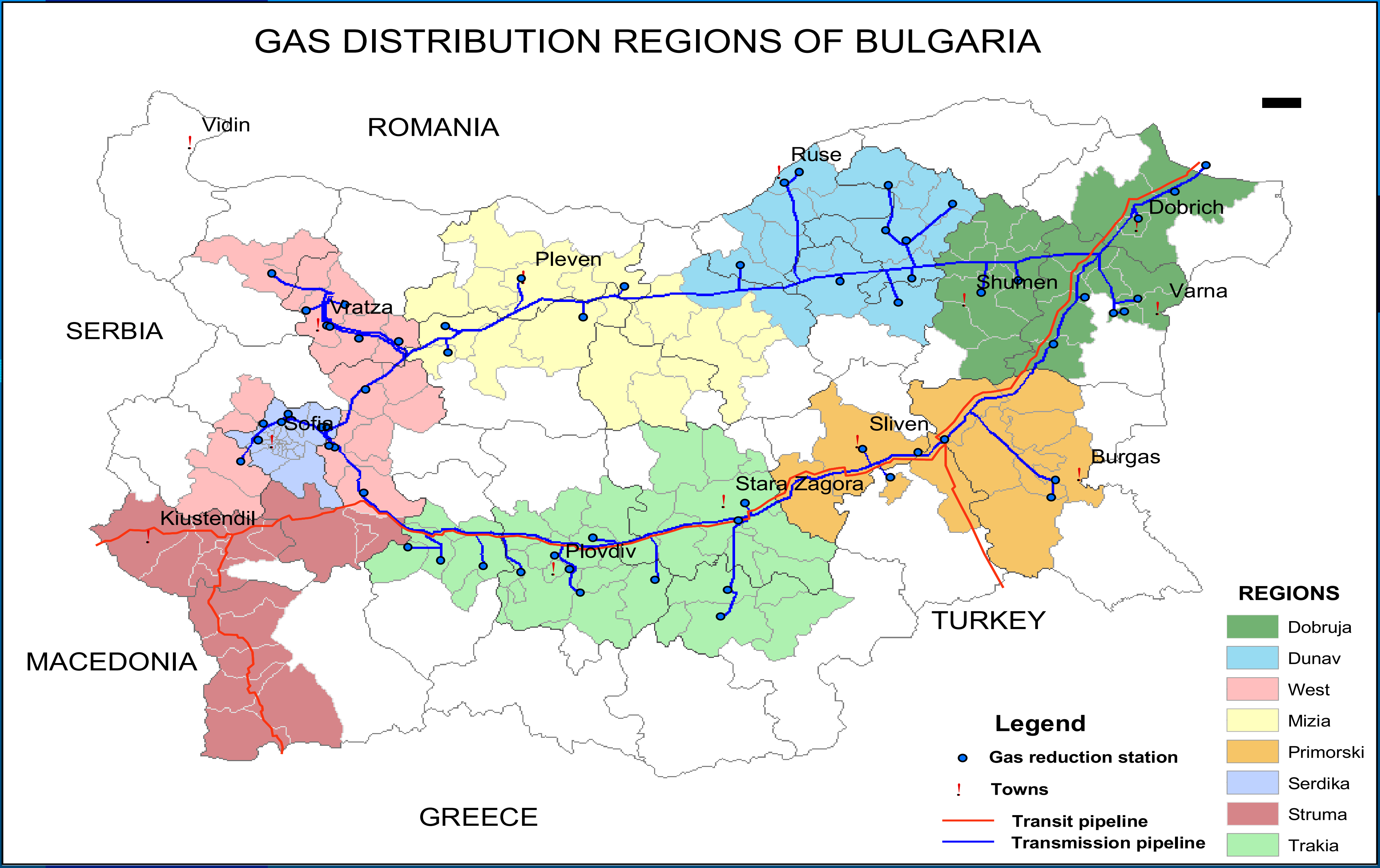
4.2. Restructuring, privatization, liberalization of the market and development of the balanced consumption structure

- Gas distribution privatization
- Liberalization of the gas market in parallel with the diversification process of the gas supplies
- Increasing the number of the middle and small natural gas consumers

4.3. Construction of new gas distribution networks

- Establishment of financially stable regional gas distribution companies
- Construction of new gas distribution networks in the big towns
- Potential market

Potential market



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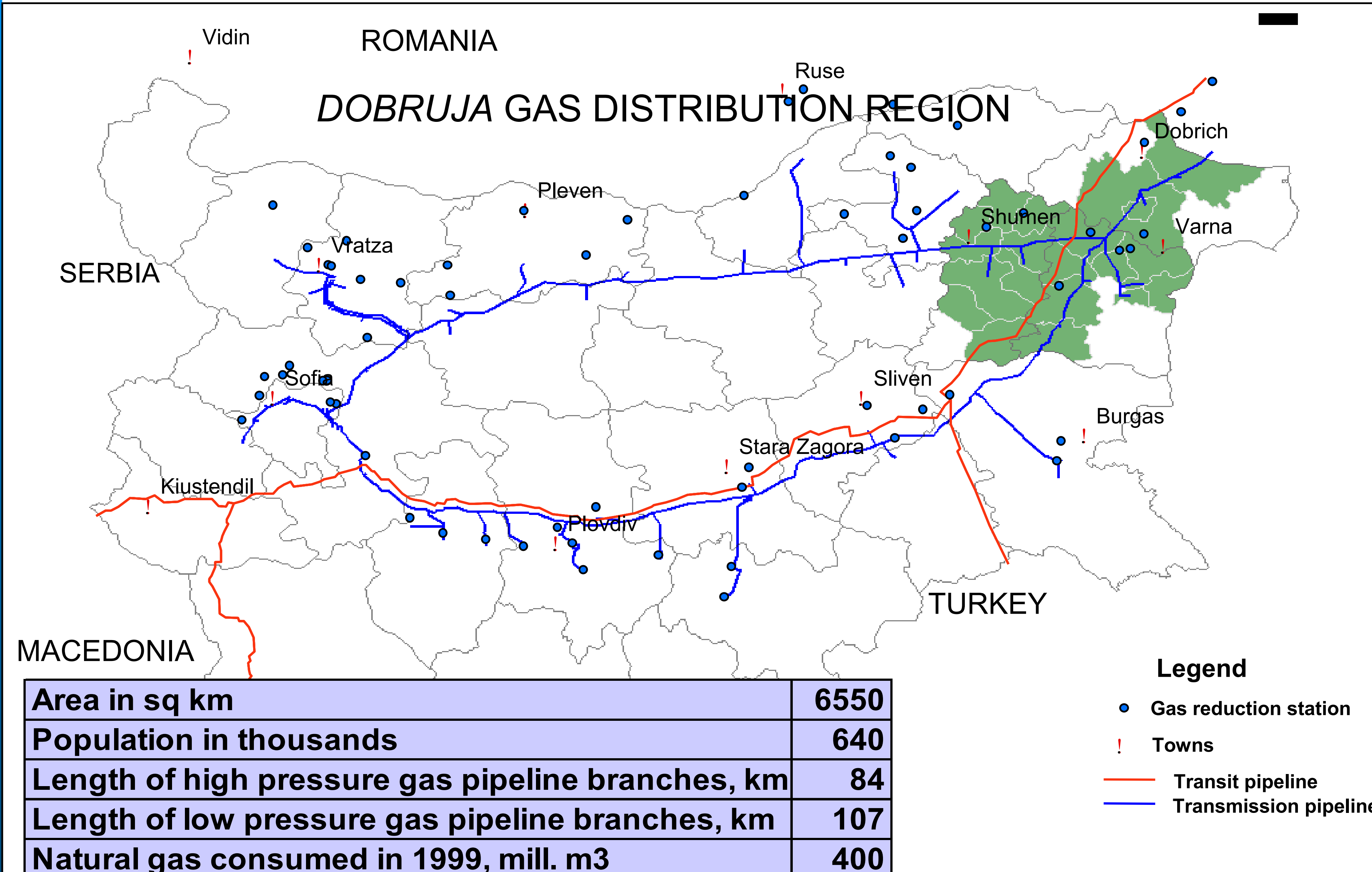

Area in sq km	6550
Population in thousands	640
Length of high pressure gas pipeline branches, km	84
Length of low pressure gas pipeline branches, km	107
Natural gas consumed in 1999, mill. m3	400
Portion of the total consumption,%	14

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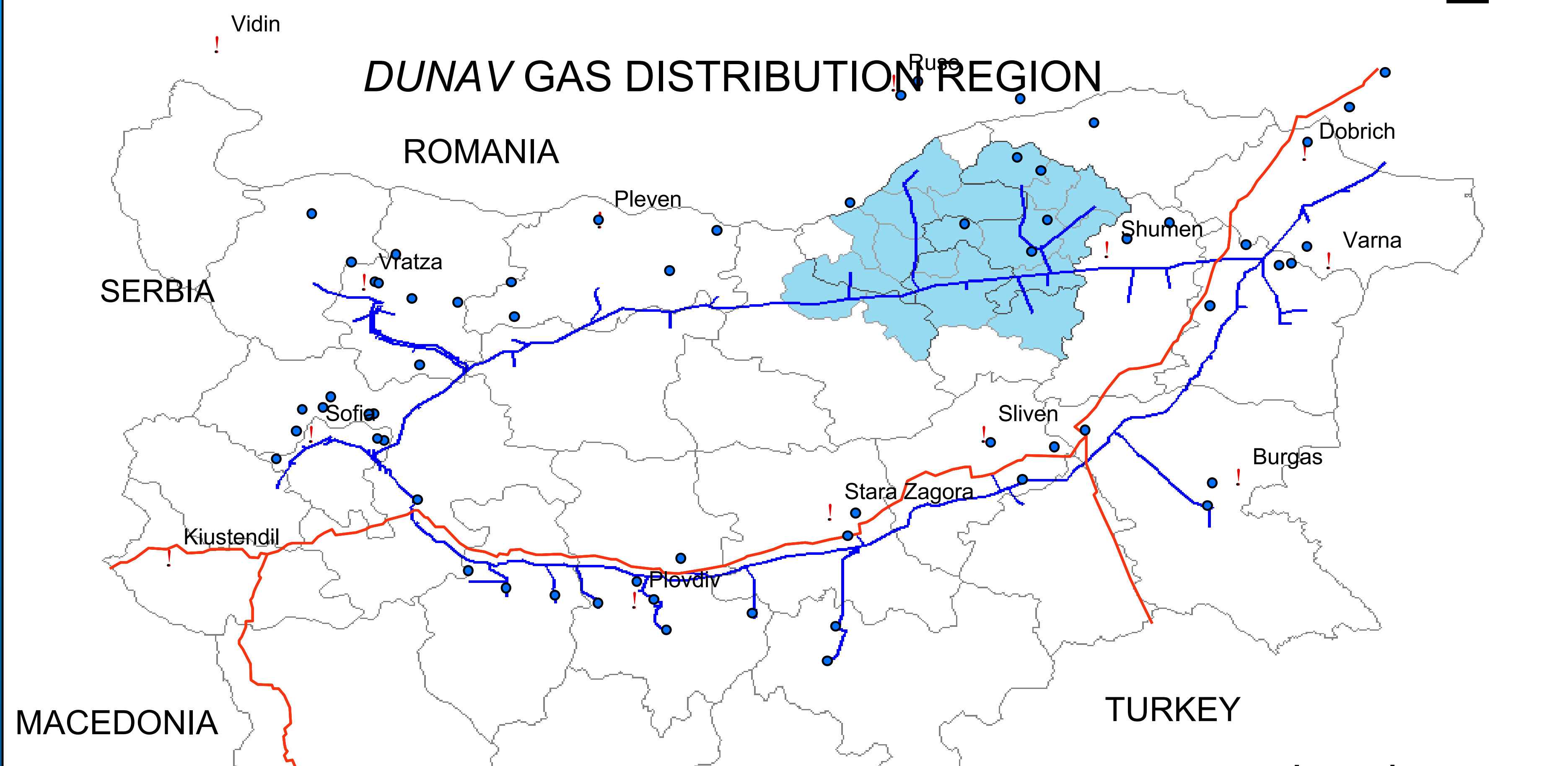
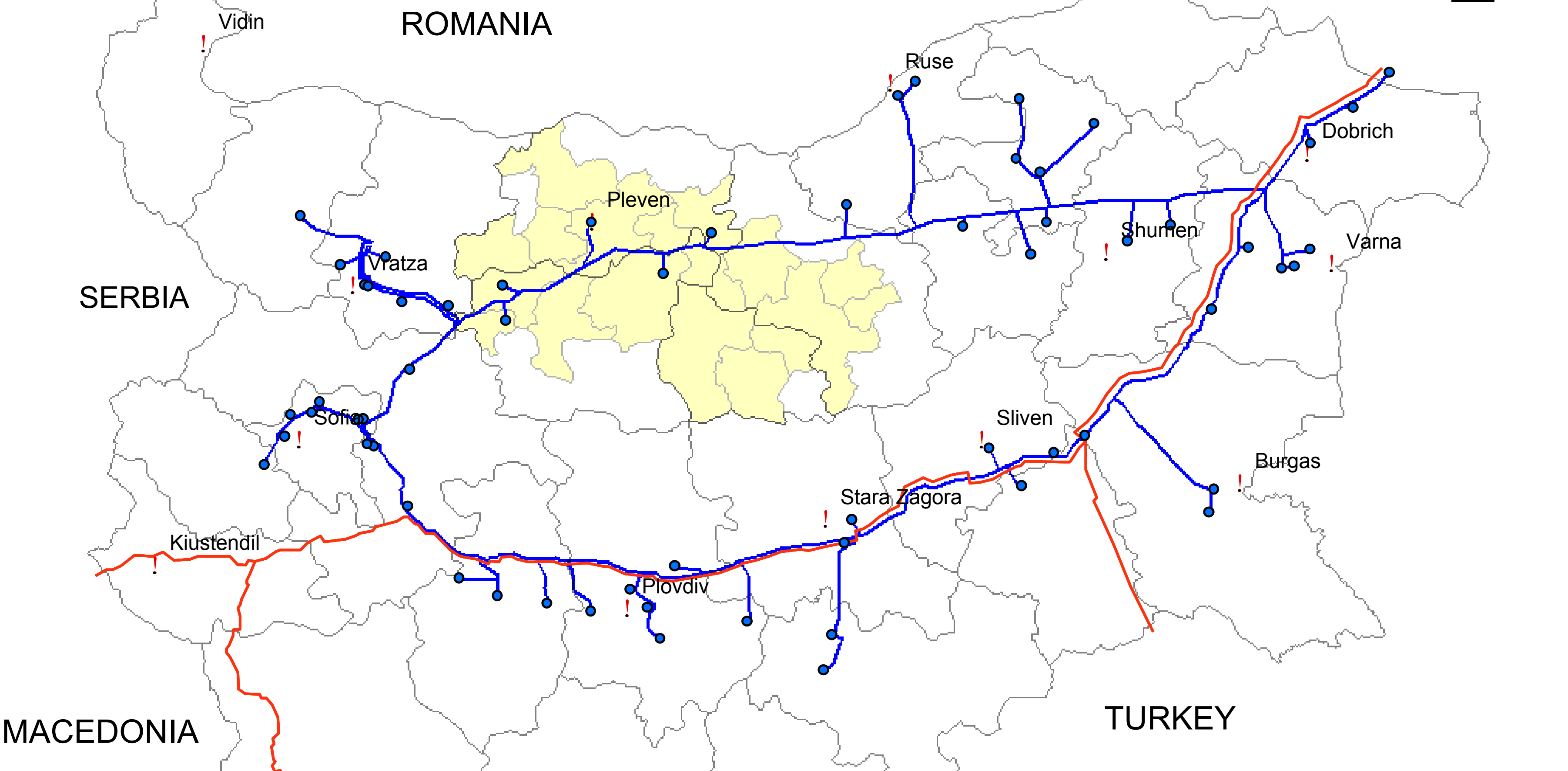


Area in sq km	7000
Population in thousands	460
Length of high pressure gas pipeline branches, km	85
Length of low pressure gas pipeline branches, km	87
Natural gas consumed in 1999, mill. m3	120
Portion of the total consumption,%	3,6

MIZIA GAS DISTRIBUTION REGION



Area in sq km	**7700**
Population in thousands	**500**
Length of high pressure gas pipeline branches, km	**165**
Length of low pressure gas pipeline branches, km	**30**
Natural gas consumed in 1999, mill. m3	**180**
Portion of the total consumption,%	**5,4**

Legend

- **Gas reduction station**
- **Towns**
- **Transit pipeline**
- **Transmission pipeline**

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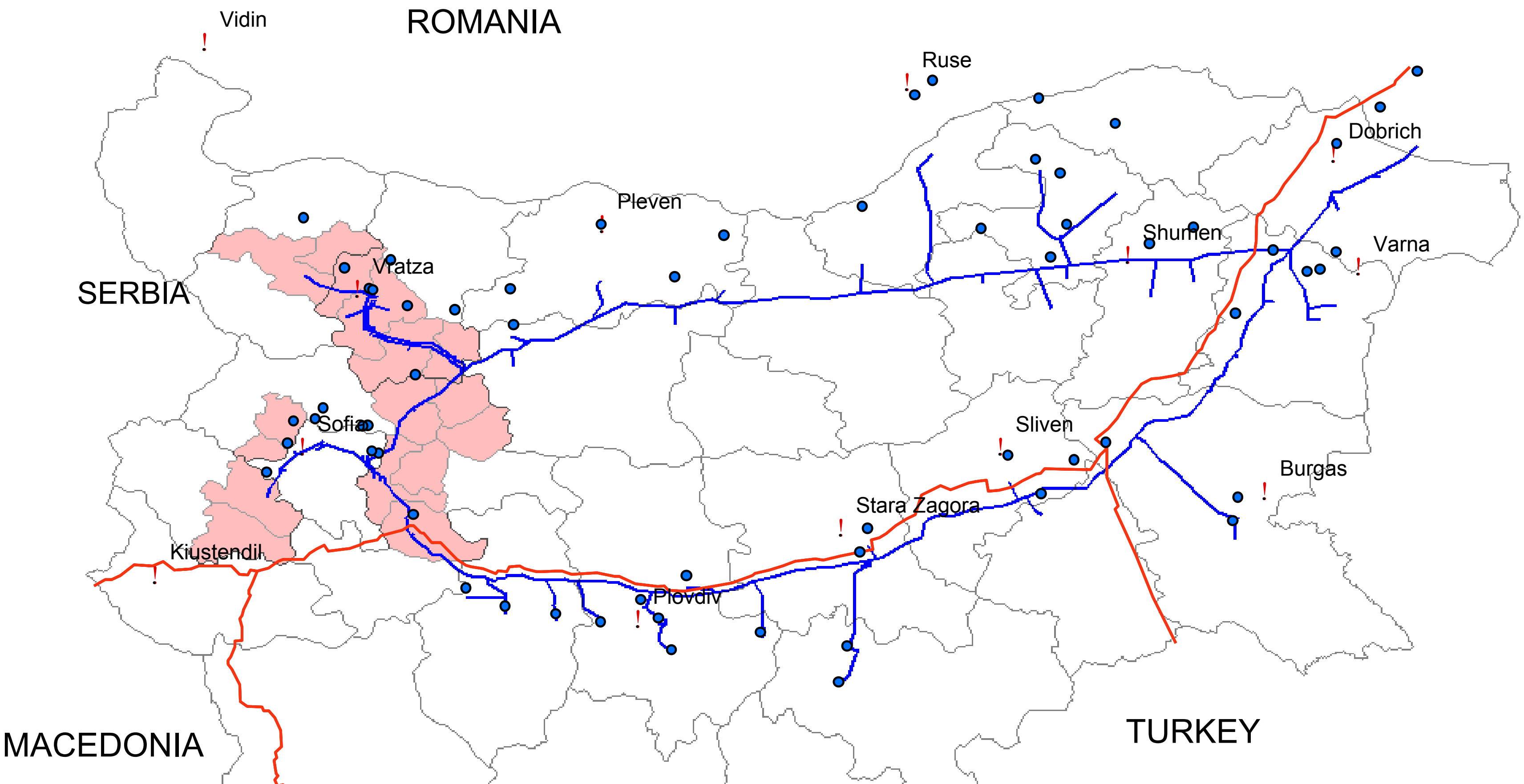
WEST GAS DISTRIBUTION REGION

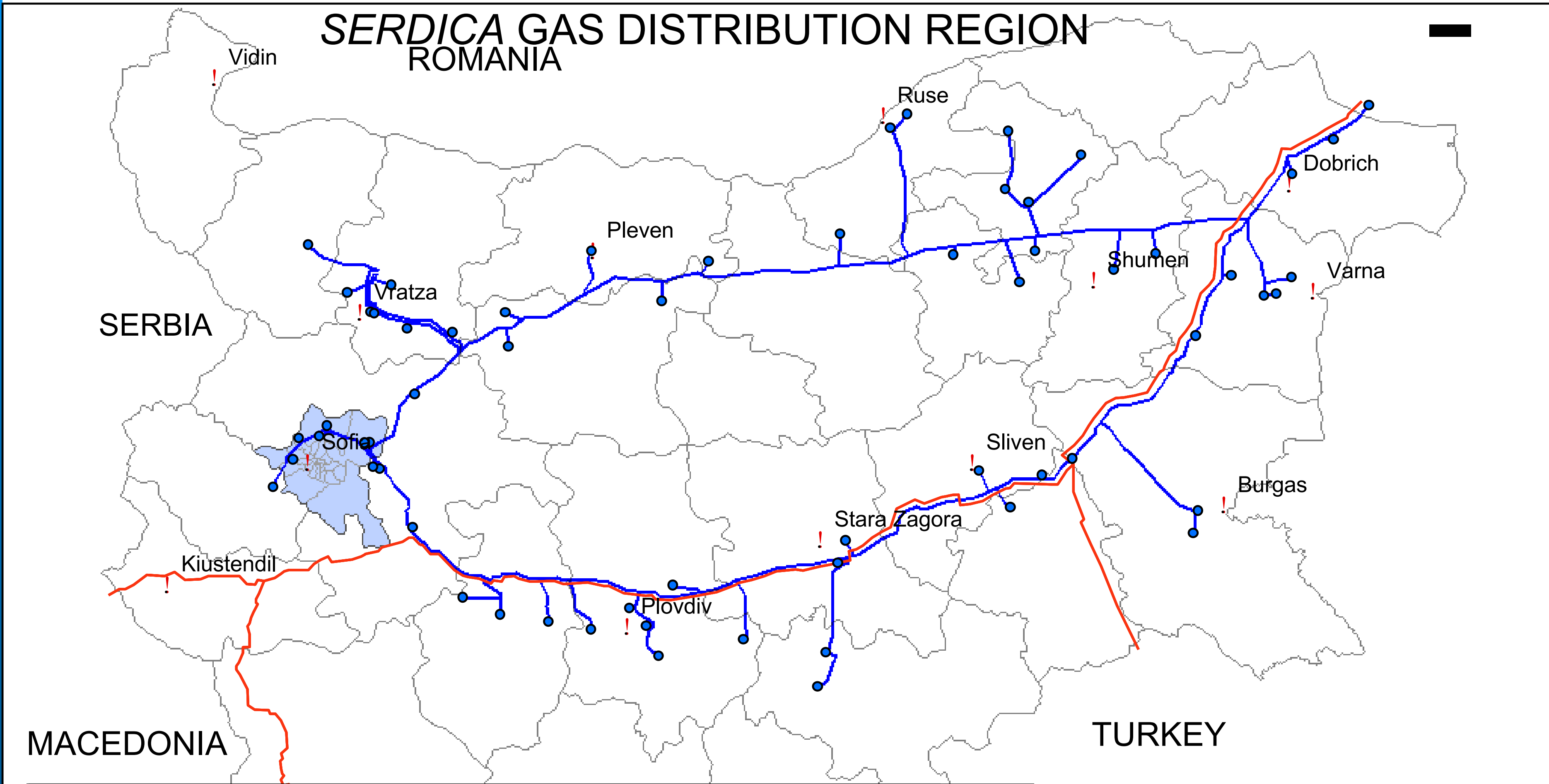


Area in sq km	8258
Population in thousands	539
Length of high pressure gas pipeline branches, km	188
Length of low pressure gas pipeline branches, km	144
Natural gas consumed in 1999, mill. m3	464
Portion of the total consumption,%	14

Legend

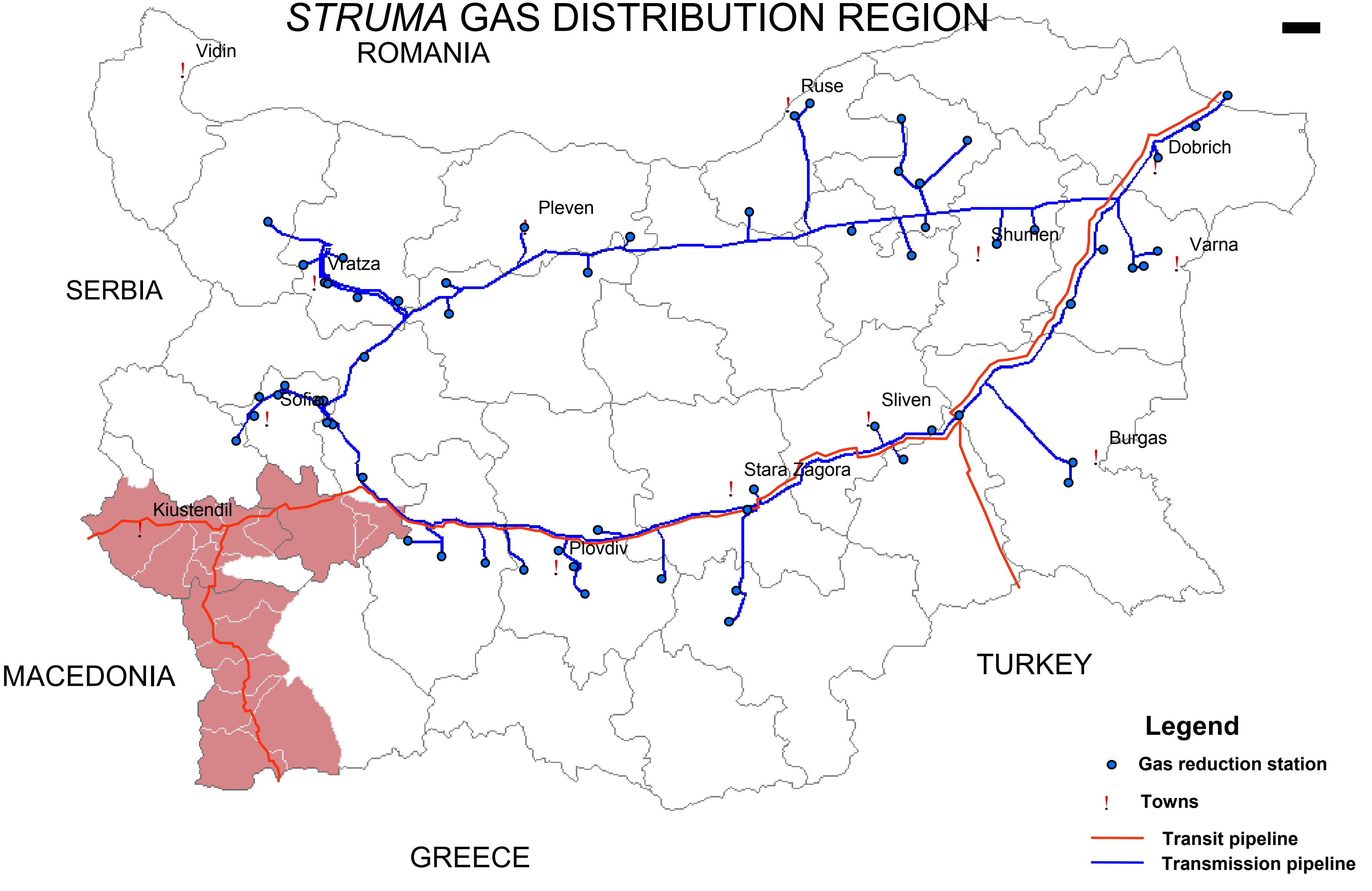
- Gas reduction station
- Towns
- Transit pipeline
- Transmission pipeline

SERDICA GAS DISTRIBUTION REGION

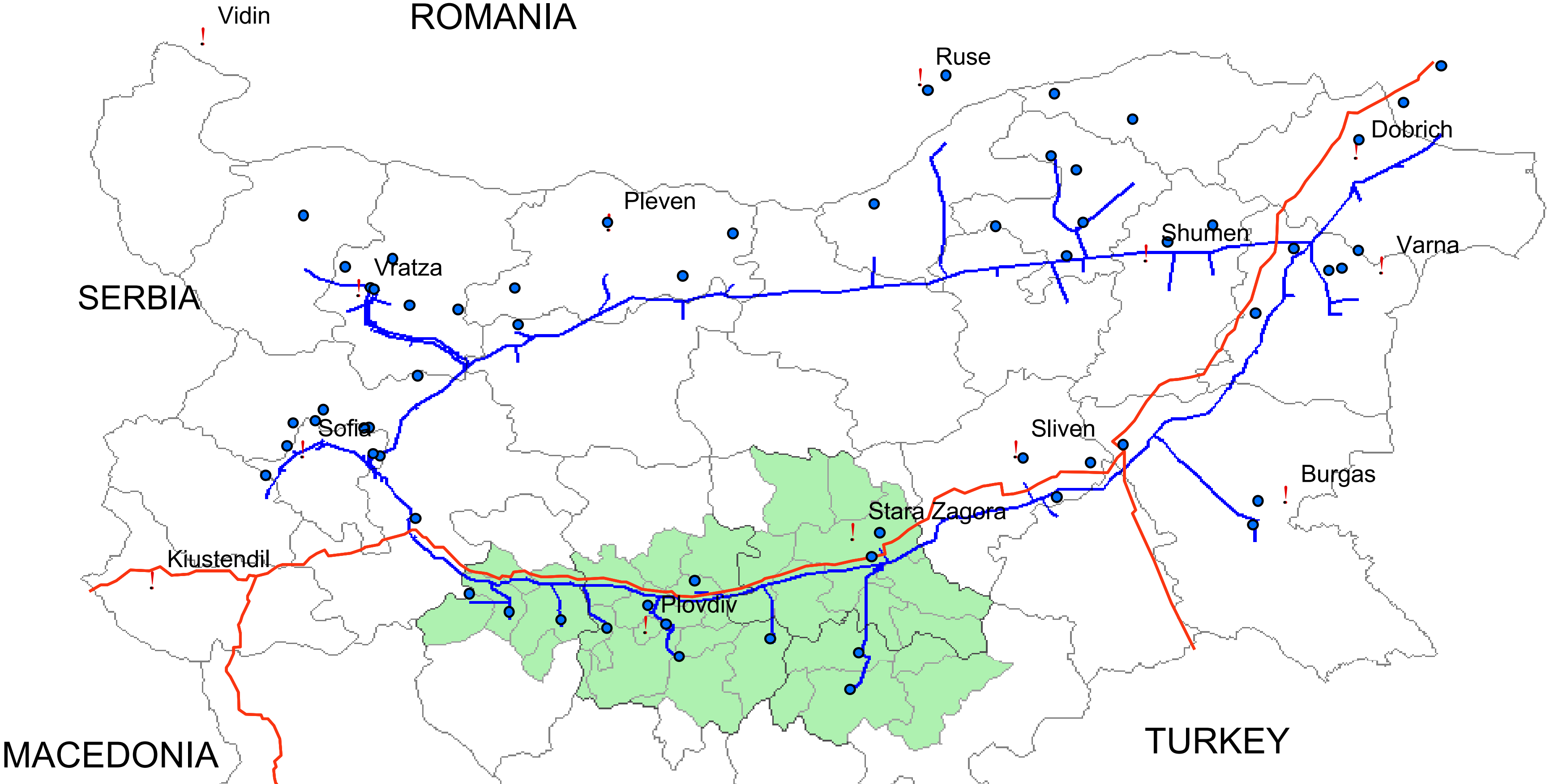


Area in sq km	212
Population in thousands	1211
Length of high pressure gas pipeline branches, km	45
Length of low pressure gas pipeline branches, km	21
Natural gas consumed in 1999, mill. m3	1088
Portion of the total consumption,%	32

STRUMA GAS DISTRIBUTION REGION



TRAKIA GAS DISTRIBUTION REGION

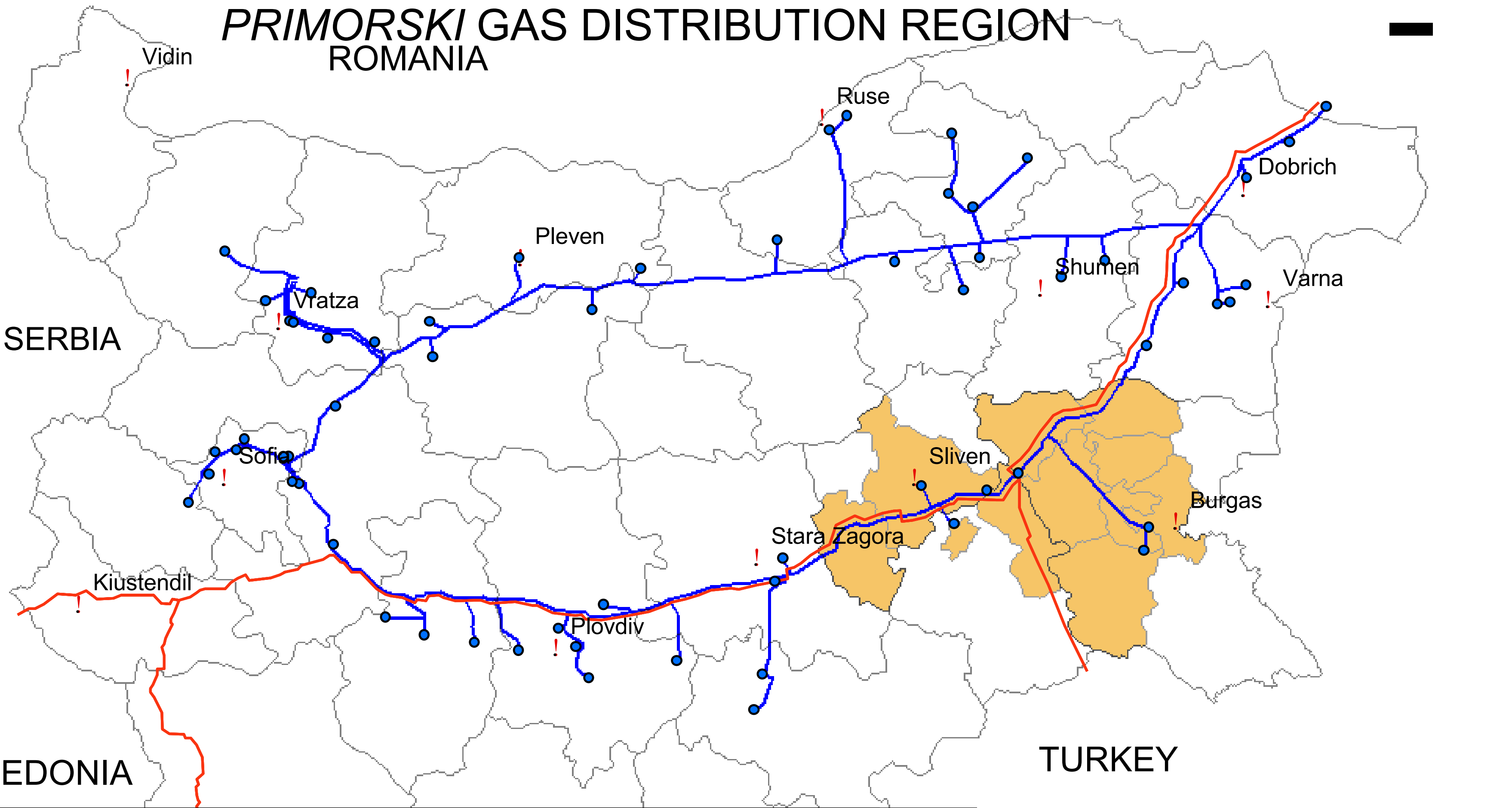


Area in sq km	10700
Population in thousands	908
Length of high pressure gas pipeline branches, km	197
Length of low pressure gas pipeline branches, km	91
Natural gas consumed in 1999, mill. m3	540
Portion of the total consumption,%	16

Legend

- Gas reduction station
- Towns
- Transit pipeline
- Transmission pipeline

PRIMORSKI GAS DISTRIBUTION REGION



Area in sq km	7580
Population in thousands	631
Length of high pressure gas pipeline branches, km	108
Length of low pressure gas pipeline branches, km	64
Natural gas consumed in 1999, mill. m3	470
Portion of the total consumption,%	15

4.3. Construction of new gas distribution networks

- State Energy Regulatory Commission won grant of the World Bank for organization and tendering the investors – transparent and clear criteria and rules
- Issuing Long term Licenses for the natural gas distribution – investments programs
- Aggregations of existing municipal and regional companies and developing of stable and balanced gas market - economy of scale

5. Projects for oil transition

- Strategic position of the country
- Reasons for transit oil routs
- Competition based on transit tariffs and political stability
- The Energy Charter Treaty, INOGATE (Interstate Oil and gas transport to Europe)
- Routs crossing Bulgaria – Burgas – Aleksandrupulis, AMBO

Transit oil routs

Burgas – Aleksandrupulis

- 290 km. Length
- 35 MTA
- Piers in Burgas and SPM in Aleksandrupulis
- Pump stations – 4
- Tank farm capacity - 900 000 m3 in Burgas and 900 000 m3 in Aleksandrupulis
- Capital cost - 700 mln EURO

AMBO

- AMBO – Albania, Macedonia , Bulgaria Oil
- 900 km length
- 35 MTA
- Piers in Burgas and SPM in Vliora
- Pump stations – 9
- Tank farm capacity - 900 000 m3 in Burgas and 900 000 m3 in Vliora
- Capital cost – 1,300 (?) mln EURO

Thank you for the attention

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