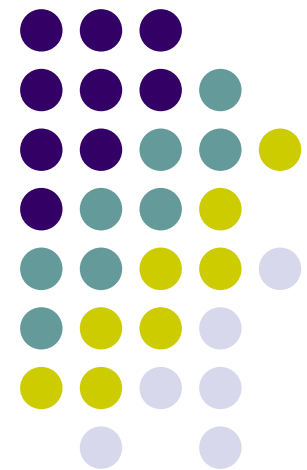




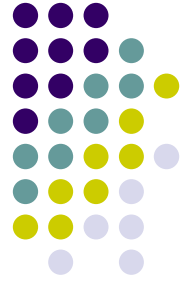
REPUBLIC OF SERBIA
MINISTRY OF MINING AND ENERGY
BELGRADE, NEMANJINA 22-26

Ministry of Mining and Energy
Republic of Serbia
www.mem.sr.gov.yu

Serbian Gas Sector



Serbian Gas sector



- Capacities are over 6 billion m³ of gas annually
- Natural gas is supplied to app.
 - 1,000 industrial consumers
 - 155,000 households

SERBIAN GAS PRODUCTION 240 M m³

NATURAL GAS IMPORT 1.750 M m³





MAIN FEATURES OF GAS PIPELINE SYSTEM IN SERBIA

TRANSMISSION CAPACITY

6.100 mil. m³ per year

Maximum working pressure 50 bar

Total length of high-pressure pipeline is 2135 km

Dimensions range from DN 150 to DN 750

Average age of pipeline: 20 years

MIDDLE PRESSURE DISTRIBUTION NETWORK

Maximum working pressure 16 bar

533 metering and regulating stations from 100 to 100.000 Sm³/h

LOW PRESSURE DISTRIBUTION NETWORK

Maximum working pressure 4 bar

Number of municipal gas distribution companies app 30

Gasified households 155.000

Material: steel and PE

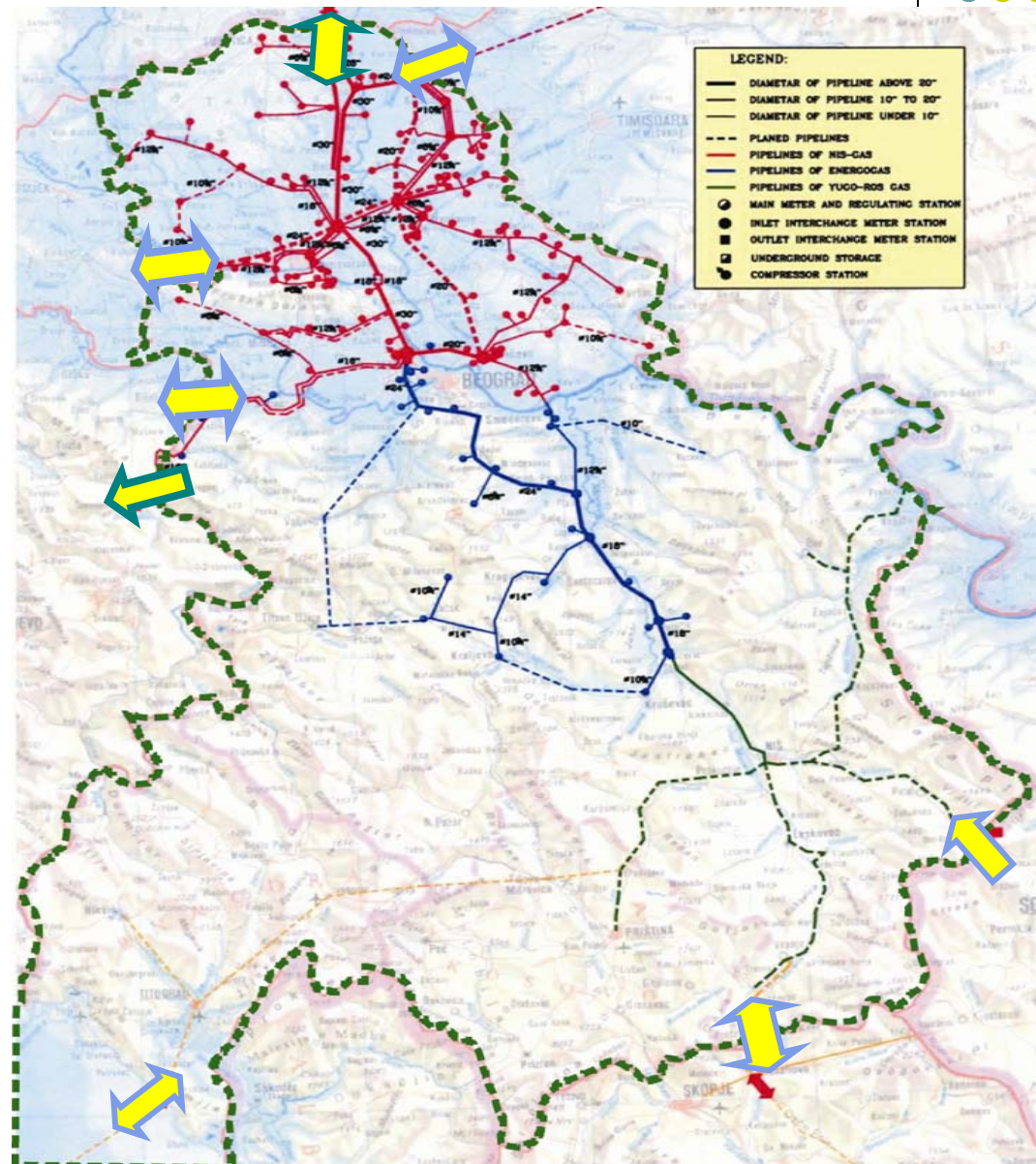


GAS PIPELINE SYSTEM OF SERBIA

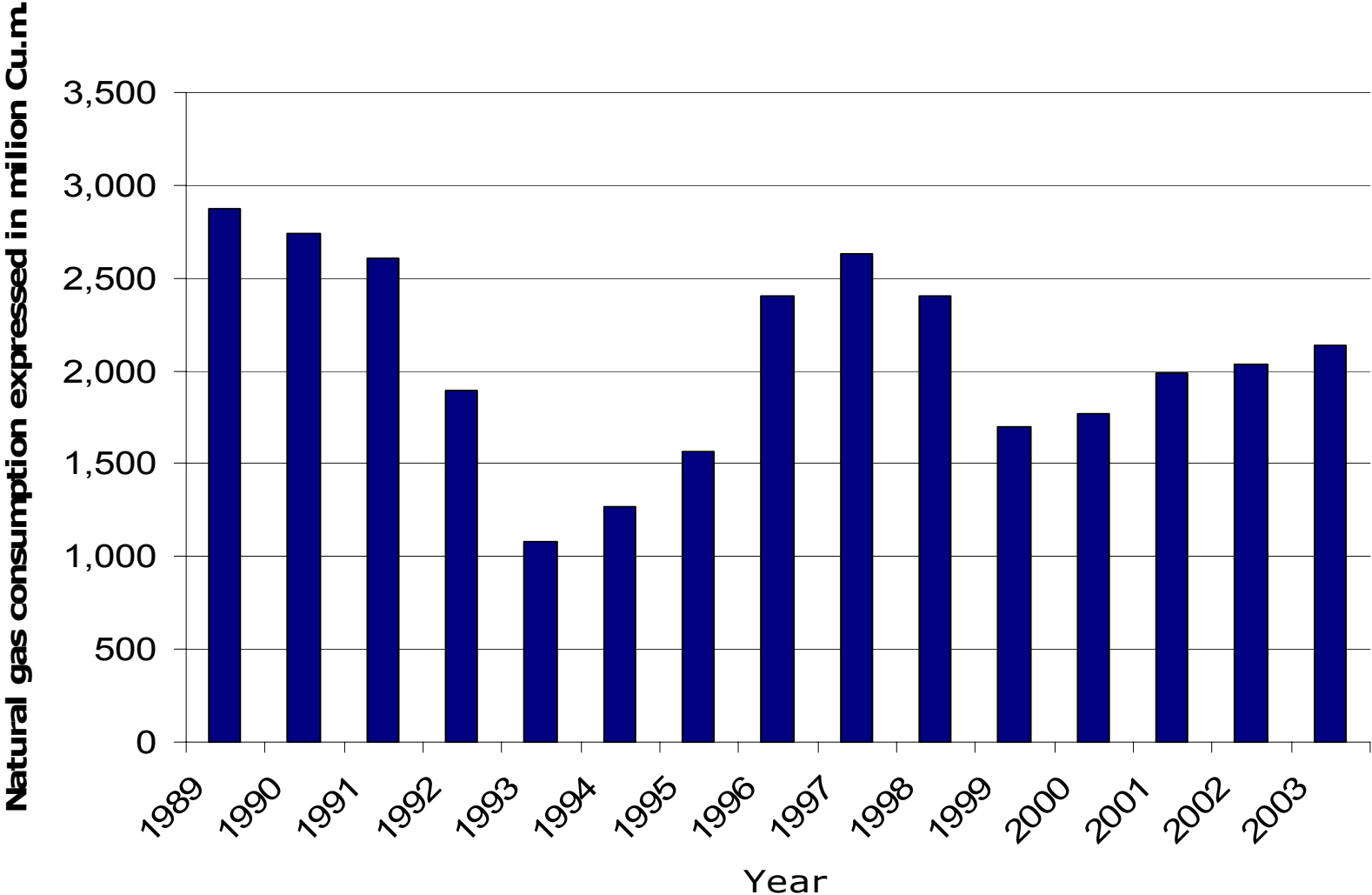
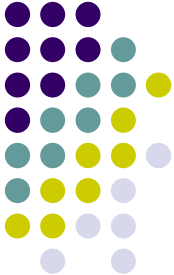
Current length 400 km

Current and potential supply routes

- Horgos (current)
- Mokrin
- Backa Palanka
- Macvanski Prnjavor
- Zvornik (current)
- Dimitrovgrad
- Kumanovo
- Bar - Bari



**THE CONSUMPTION OF
NATURAL GAS
FOR THE PERIOD 1989-2003**



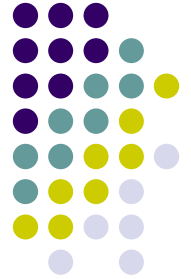


OIL & GAS CONSUMPTION FORECAST - SERBIA

	2002	2004	2006	2010	2014
OIL SECTOR (M toe)					
Final consumption	2.378	2.901	2.729	3.012	3.260
Energy transformation	0.181	0.241	0.241	0.314	0.364
Non-Energy consumption	0.530	0.606	0.591	0.625	0.685
Losses	0.271	0.332	0.318	0.341	0.352
Total demand	3.36	4.08	3.879	4.292	4.661
Domestic production	0.667	0.670	0.813	0.974	1.000
Crude oil import	2.693	3.410	3.066	3.318	3.661
GAS SECTOR (M m3)					
Final consumption	1.587	1.563	1.929	2.345	2.598
Energy transformation	0.042	0	0	0	0
Non-Energy consumption	0.056	0.432	0.660	0.710	0.760
Losses	0	0.005	0.005	0.005	0.005
Total demand	1.685	2.000	2.594	3.060	3.363
Domestic production	0.268	0.242	0.302	0.318	0.400
Natural gas import	1.417	1.758	2.292	2.742	2.963



BASIC ACTIVITIES



- EXPLORATION AND PRODUCTION
- NATURAL GAS AND LPG TRANSPORT, DISTRIBUTION AND MARKETING
- REFINERY PROCESSING
- MARKETING AND TRADE
- ENGINEERING SERVICES
- RELATED ACTIVITIES (NON CORE)

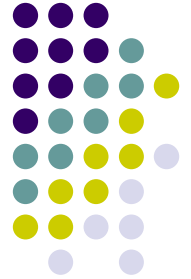
Strategic Investments into development of Gas Sector in Serbia



Underground Gas Storage

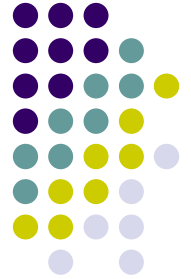
**Connection to other gas pipeline
systems in the region**

**Construction of gas distribution
networks**



UNDERGROUND GAS STORAGE BANATSKI DVOR

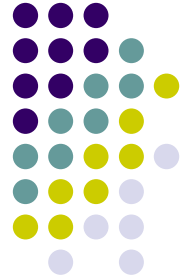
- **ESTIMATED GAS CONSUMPTION IN 2004 2,5 bill.m³**
- **PLANNED GAS CONSUMPTION BY 2010 3,5 bill.m³**
- **SINGLE SUPPLY ROUTE (RUSSIA) CURRENTLY AVAILABLE**
- **STORAGE OF 25-30% OF ANNUAL GAS CONSUMPTION**



UNDERGROUND GAS STORAGE BANATSKI DVOR

PURPOSE

- STORAGE OF SURPLUS IMPORTED GAS FROM GAS PIPELINE SYSTEM DURING SUMMER SEASON
- PROVISION OF CONTINUAL AND EVEN GAS PRODUCTION FROM OWN RESERVOIRS
- ELIMINATION OF SEASONLY DISCORDANCE OF GAS PRODUCTION AND CONSUMPTION
- OPTIMAL USAGE OF TRANSITION AND TRANSPORTING GAS PIPELINE SYSTEM
- COMPENSATION OF PEAK GAS PRODUCTION DURING WINTER SEASON



UNDERGROUND GAS STORAGE BANATSKI DVOR

INVESTMENTS

- **REQUIRED INVESTMENT 128 million USD**
- **EQUIPMENT AND WORKS 65 million USD**
- **CUSHION GAS 63 million USD**

GAS STORAGE IS PLANED TO BE CONSTRUCTED IN TWO PHASES

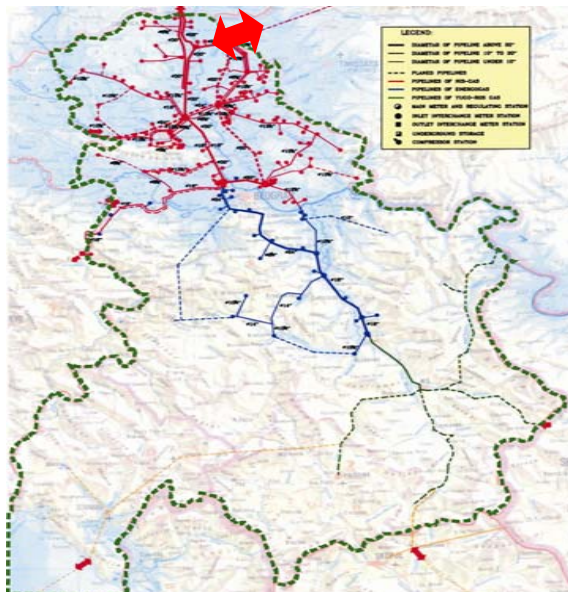
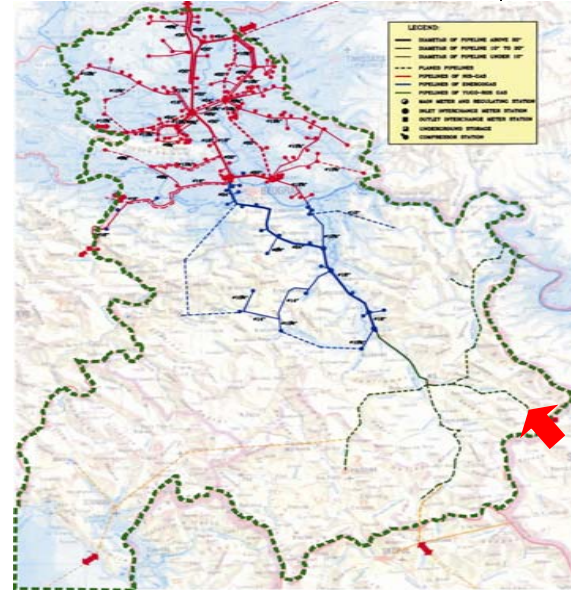
- **PHASE I 2004 - 2006 50 million USD**
 - **EQUIPMENT AND WORKS 7 million USD**
 - **CUSHION GAS 43 million USD**
- **PHASE II STAGE 2006 - 2011 78 million USD**

Alternate supply and transit routes



SUPPLY ROUTE FROM BULGARIA

- Project status: under construction
- Import direction: Dimitrovgrad-Niš-Pojate
- Pipeline length: 188 km
- Pipeline capacity: 1800x10⁶ m³/y
- Investment estimate: 32,000,000 USD



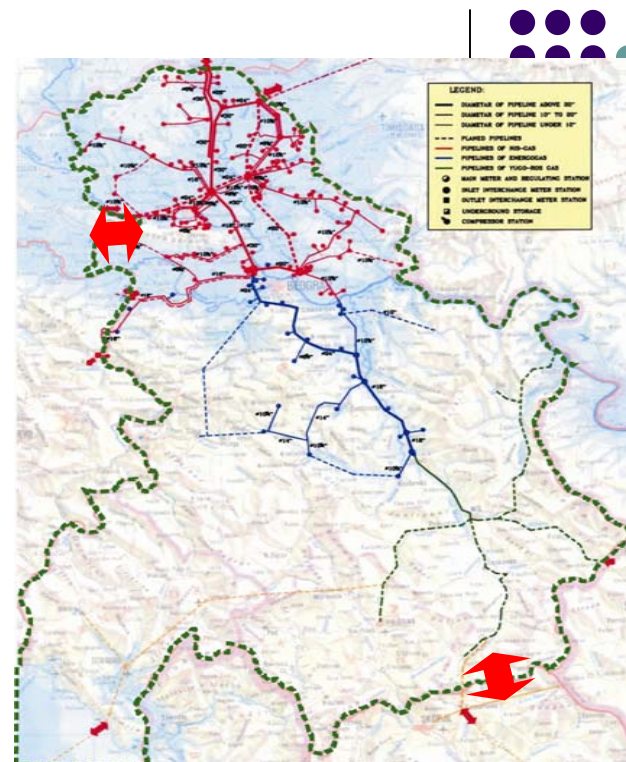
SUPPLY ROUTE FROM ROMANIA

- Project status: potential
- Import direction: Arad-Mokrin
- Pipeline length: 76 km
- Pipeline capacity: 1600x10⁶ m³/y
- Investment estimate: 18,500,000 USD

Alternate supply and transit routes

GAS TRANSIT TO BOSNIA AND HERZEGOVINA (SAVA PROJECT)

- Project status: in preparation
- Route: Batajnica-Bijeljina-Novi Grad
- Pipeline length: 98 km (Serbian side)
- Pipeline capacity: $1200 \times 10^6 \text{ m}^3/\text{y}$
- Investment estimate: 50,000,000 USD



SUPPLY ROUTE FROM MACEDONIA

- Macedonia has constructed Kriva Palanka-Skopje pipeline, which is practically out of use. There is a possibility to import $500 \times 10^6 \text{ m}^3/\text{y}$ via Kumanovo-Leskovac-Niš branch

Alternate supply and transit routes



CONNECTION TO CROATIAN PIPELINE SYSTEM

- Project status: potential
- Interconnection of Serbian and Croatian pipeline systems would provide transit of gas to Croatia, particularly in case of connection to Romania pipeline system (Arad-Mokrin route)
- Connection routes: Sombor-Osijek, Bačka Palanka-Ilok, Sremska Mitrovica (Šid)-Vinkovci
- Technical parameters would depend on the intended use, connection routes and desired capacity

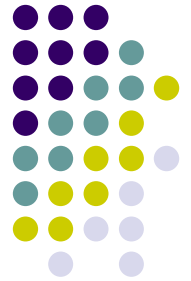
Legislative framework for Oil & Gas Sector



Energy Law is enforced on August 1st and is supposed to form new regulatory framework for activities in gas sector:

- Minister issues energy permission for construction and reconstruction of direct pipelines, transportation pipelines, underground gas storage, distribution pipelines, and storage capacities for CNG
- New energy entities are to be established in order to make possible for the gas market to function such as: transportation and distribution system operator. Energy law gives basics for market opening and two categories of customers are defined: captive customers and eligible customers (eligibility threshold is determined to be 50 M m³/y)

Legislative framework for Oil & Gas Sector



•Distribution of natural gas is considered to be energy activity of common interest and public enterprises can be distributors, and any other enterprise that has been authorized by the Government

•Another precondition for energy activities (natural gas transportation, natural gas transportation system operation, natural gas storage operation, natural gas distribution, natural gas distribution system operation, trade in natural gas) is the necessity to have license that is to be issued by the Energy Agency that hasn't been established yet

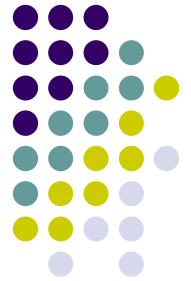
Legislative framework for Oil & Gas Sector



Other regulation that might be of interest for foreign investors are:

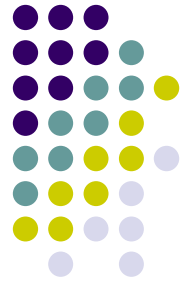
- **Law on concessions**
- **Law on foreign investments**
- **Enterprise Law**
- **Law on public enterprises and activities of a common interest**

Approach to the reforms



- **MoME prepares, Government approves and Parliament adopts the energy policy and related legislation**
- **RAE implements the regulation**
- **Energy companies perform energy related activities**

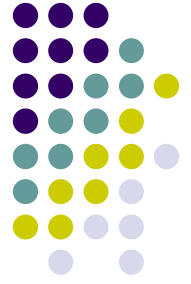
Energy sector reform - goals



- **EFFICIENCY**

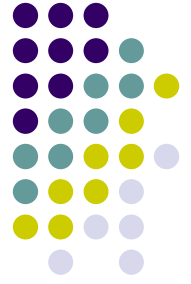
- Rehabilitation and modernization
- Restructuring of PEes
- Demand side management
- Introducing competition
- Regulation of natural monopolies

Reform Activities Underway



- **LEGAL AND REGULATORY FRAMEWORK**
 - **New Energy Law and secondary legislation**
 - **Energy Sector Development Strategy (drafted)**
 - **Related legislation (adopted or drafted)**

Reform Activities Underway

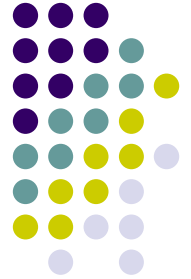


- **INSTITUTIONAL FRAMEWORK**
 - **Establishment of the Energy (Regulatory) Agency**
 - **Establishment of the Serbian Energy Efficiency Agency**
 - **Establishment of the TSO, MO, DSO**

Reform Activities Underway



- **REGIONAL INTEGRATION- ATHENS PROCESS**
 - **MoU on SEE REM**
 - **ECSEE Treaty**



**THANK YOU FOR YOUR
ATTENTION**