



# Quality of Gas Supply Service in Serbia

**- Monitoring -**

Belgrade, May 2011.

# Serbian Natural gas Sector

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- **Number** of customers: 252.092 (95.5% households)
- **1 TSO** (new Energy Law envisages 2)
- **36 DSOs/suppliers**
- **11 Traders** on free market
- **Consumption:** 2.3 bil m3 in 2010.
- **Market opening:** potential 87%  
(actually 46,6% in 2010., 9 customers)

# Legislation - Documents

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## Documents regulating quality of service:

- **Energy Law**
- **Law on pipeline transportation and distribution of hydrocarbons**
- **Ordinance on terms of natural gas supply**
- **Standards (JUS HF1.001)**
- **Grid Codes** (still not prepared, consultants engaged)

# Legislation

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**According to existing Energy Law responsibility to control the quality of gas and regularity of it's delivery is within the competencies of the inspector.**

Also responsible are:

- **TSO** – providing service
- **DSO** – providing service
- **Suppliers** – providing service

# Legislation – Role of the Regulator

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- Monitoring the implementation of regulations and network codes
- Collecting and processing data on energy undertakings with reference to performing energy activities
- Harmonizing activities of energy undertakings on providing regular supply of energy and services to customers
- Customer protection

Unfortunately, the legislation in force does not provide clear competences regarding quality of service regulation.

# Legislation - Commercial quality (I)

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- **Energy Law**

- **Request for connection to the network**

- ⇒ Decision to be made within 30 days after the written request is submitted

- **Connection to the network**

- ⇒ within 15 days following conclusion of supply contract and fulfillment of the customer's obligations

- **Supply contract, among other things, has the provision regarding:** time of connection, quality and portfolio of supply, obligations deriving from the no fulfillment obligations about quality and continuity of supply

- ⇒ **Financial penalties**

- 10.000-100.000 dinars (approx. US\$136-1360)

# Legislation - Commercial quality (II)

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- **Energy Law:**

- **Technical or other disruption of energy delivery not caused by customer's facility (except interruption)**

⇒ to be remedied by the network company within 24 h and maximum two days from the date of customer's notice

- **Technical or other disruption of energy delivery caused by customers facility or customer's failure to fulfill contractual obligation**

⇒ to be remedied by the customer within period not shorter than 3 days from the written warning

# Legislation - Commercial quality (III)

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**Ordinance on terms of natural gas supply – gas delivery can be interrupted in cases envisaged by Energy Law, this decree and Supply contract. Possible cases:**

- 1) if the customer does not pay for the gas supplied and services as agreed by the contract;
- 2) if the customer connected its inner gas installations on transportation/distribution system without authorisation;
- 3) if the customer uses natural gas without Decision, i.e. decision on natural gas supply;



# Legislation - Commercial quality (IV)

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- 4) if the customer uses natural gas by bypassing meters or by using an inadequate meter;
- 5) if the customers prevents proper metering of the natural gas quantities supplied;
- 6) if the customer uses natural gas under the terms which are contrary to the terms stated in the Decision and Contract for natural gas supply;
- 7) if the customer, with its facility, disturbs natural gas supply to other customer;

# Legislation - Commercial quality (V)

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- 8) if the customer allows use of natural gas to other legal or natural person via his gas installations;
- 9) if the customer does not abide the codes of transportation/distribution system;
- 10) if the customers denies or disallows authorised personnel access to meters, i.e. metering stations;
- 11) if the customer disallows or denies technical inspection of internal gas installations;

# Legislation - Commercial quality (VI)

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- 12) if the customer in case of saving and rational natural gas consumption does not abide and implement required measures;
- 13) if the customer's internal installations jeopardise lives, properties and environment, i.e. do not meet predetermined standards, regulations and the technical normatives applied;
- 14) if the customer refuses to sign the contract on natural gas sales and/or does not provide payment guarantees in case the contractual arrangements are not met;
- 15) in case of the written request of the customer.

# Legislation - Commercial quality (VII)

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- **Ordinance on terms of natural gas supply:**

- **Extra meter check-up**

- ⇒ to take place within 10 days from the customer's or energy undertaking's request

- ⇒ if the meter proves not to be faulty, applicant pays full costs of verification, otherwise the owner of the meter

- **Meter problems**

- ⇒ energy undertaking to inform the customer immediately and no later than 2 days about the faults or damages observed and vice versa

# Legislation – Reliability and security

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Basis for the reliability is set in the:

- \* **Energy Law**

but clear provisions to be set in the network codes

- \* **Law on pipeline transportation and distribution of hydrocarbons**

⇒ **Standards are not defined yet**

Reliability indicators: frequency and duration of gas interruptions.

# Monitoring Quality of service

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## Quality of service monitoring by:

- **Regulator**

- Connection process monitored through deciding upon appeal on the connection to the network refusal or failure to pass a decision upon an application for connection
- New draft Energy Law envisages the regulator to adopt rules on monitoring and regulation of the electricity and natural gas delivery & supply quality

- **Network companies**

- No legal obligation for monitoring, and no previous experience in data gathering and possible analysis

# Monitoring – natural gas quality

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- Various European associations attempt to harmonise the definition of gas quality
- EASEE-gas developed a common business practice (CBP) which governs gas quality on cross-border and delivery points in Europe
- Gas quality is usually regulated on national level whereas the norms and standards are defined by industry associations or by state authorities. The following indicators are used whereas the regulations apply either max values or tolerance bands: Wobbe index, calorific content, chemical content, odorization, impurities of solid or liquid materials (e.g. condensate)

# Monitoring – natural gas quality

Currently there are some national effective norms in Serbia. The table below shows the level of these norms.

*Source: Rulebook No. 07—93/217 of 1988—12—13; Official Gazette of SFRY, No. 6/89, YUGOSLAV STANDARD WITH MANDATORY APPLICATION of 1989—03—27 (Based on the standard JUS.HF1.001)*

**Table 1: Effective Norms for Natural Gas in Serbia – Physical Properties**

Dimension	Symbol	Unit	Subgroup L	Subgroup H
Wobbe index Entire Area	$W_g$	kW h/m <sup>3</sup>	10,5 do 13,0	12,8 do 15,7
		MJ/m <sup>3</sup>	37,8 do 46,8	46,1 do 56,5
Nominal value		kW h/m <sup>3</sup>	12,4	15,0
		MJ/m <sup>3</sup>	44,6	54,0
Allowed deviation in municipal distribution		kW h/m <sup>3</sup>	+0,6 -1,2	0,7 -1,4
Heat value	$H_g$	kW h/m <sup>3</sup>	8,4 do 13,1	
		MJ/m <sup>3</sup>	30,2 do 47,2	
Relative density	d	—	0,55 do 0,70	
Connection pressure Entire area <sup>2)</sup> Nominal value	$P_c$	mbar	18 do 24	
		mbar	20	



# Monitoring – natural gas quality

Parameters	Units	Maximum value
Hydrocarbons, condensation temperature	°C	in working condition
Steam, condensation temperature	°C	in working condition
Fog, dust, fluid		Qualitative requirements
Oxygen	% (V/V)	
- in dry distribution networks		3
- in humid distribution networks		0,5
Total sulphur	mg/ m <sup>3</sup>	120
- short term	mg/ m <sup>3</sup>	150
Sulphur Mercaptan <sup>3)</sup>	mg/ m <sup>3</sup>	appr. 6
- short term	mg/ m <sup>3</sup>	16
Sulphur Hydrogen	mg/ m <sup>3</sup>	5

*Effective Norms for Natural Gas in Serbia – Impurities*

# Monitoring - Commercial quality

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- Standards are still not introduced, monitoring system has not been developed yet
- Only connection process has been monitored through the Regulatory activities in the process of deciding upon customer's appeal
- Decision on record keeping about the quantities delivered through the transportation system exists, but is not applied any more

# Regulator - plans for monitoring

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- **Monitoring activities**

- **Questionnaire for network companies**

- ⇒ in order to analyze actual situation regarding monitoring activities and quality of service levels

- **Information Code concerning quality of service**

- ⇒ in order to establish unified rules for data recording and collecting and provide relevant data base

- **Questionnaire for customers**

- ⇒ in order to get reliable information of customers' needs, expectations and affordability

# Regulator - objectives

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- **Determination of actual levels of quality of service**
- **Imposing of standards**
- **Monitoring of future development**
- **Introduction of quality provisions into the new incentive-based price regulation model-** company's performance is compared to a quality target: deviations result in either a penalty or a reward

# Regulator – possible activities

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- **Application of shadow standards**, for instance for the first two years, and then enforcement of overall and guaranteed standards
- **Possible overall standards:** answering telephone calls, notification of individual customers of planned supply interruptions, carrying out minor works i.e. changing meters, moving meters, new low pressure connections, responding of gas emergency, reaction upon a receipt of a reported gas leakage
- **Possible guaranteed standards:** restoration of gas supply, reconnection following lack of payment, response action to emergency calls, appointments scheduling, problems in meter/pressure regulators, queries on charges and payments

# Regulator – possible activities

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- **Initiation of discussion with the Serbian Organization for Standardization and other involved or interested institutions for extending and tailoring (for regulatory purposes) the gas quality norms in Serbia**
- **Monitoring the compliance with regard the gas quality with the current norms based on annual reports provided by the companies to AERS**

# Regulator – possible activities

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## Collection of data by information code:

### Number of connection requests in a year

- a) number of positive decisions (connection completed and operational)
- b) number of negative decisions (connection denied)
- c) number of requests currently in work

### Average time necessary to make a decision on connection, in days.

### Number of customers/users complaints

- a) number of positively solved complaints
- b) number of negatively solved complaints
- c) number of complaints currently in work

# Regulator – possible activities

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## Number of gas supply interruptions in a year

- a) number of planned interruptions
- b) number of unplanned interruptions

## Total duration of the interruptions in a year (hours)

- a) duration of planned interruptions(hours)
- b) duration of unplanned interruptions(hours)

## Customers with special needs:

- Customers who need extra quality,
- Vulnerable customers: the elderly or disabled, customers with very low incomes,etc.



# Quality regulation - obstacles

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## Legislative constraints:

- Responsibilities and competences regarding quality regulation are not explicitly set in the Energy Law
- Regulator is not empowered to set quality of service standards and penalty/compensation payments if standards are not met
- Regulator could regulate quality of service indirectly through the process of giving approval to the grid and distribution code

⇒ **Energy Law has to be changed in order to implement system for quality regulation**

***Thank you for your attention!***

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## **QUESTIONS?**



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