ENERGY AGENCY
OF THE REPUBLIC OF SERBIA

Methodologies and Tariff systems

in natural gas sector of the Republic of Serbia

Mladen Petronijevic

Senior Expert for Economics and Finance

NARUC' Energy Regulatory Partnership Program

AERS – PA PUC

2nd Partnership Activity

Belgrade, September 15 – 19, 2008

1

Methodologies

- 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)

   (Methodology for natural gas storage is in preparation)

2

Methodologies

- Method of regulation: "cost plus" ("rate of return")

- Maximally allowed revenue provides the cover of justified operating costs, as well as the return on the assets employed (in case of network)

- The regulatory period lasts one year (starts on 1 January 2007)

- Precondition for methodologies implementation: account unbundling in accordance with energy and other activities, under the Energy law

3

Methodologies

- Transportation and distribution:
$$MAR_t = OC_t + D_t + WACC \times RAB_t - OR_t + KF_t$$
- TSO and DSO:
$$MAR_t = OC_t + D_t + WACC \times RAB_t - OR_t + L_t + KF_t$$
- Wholesale:
$$MAR_t = OC_t + D_t + NGP_t + TC_t + SC_t + RCR_t + KF_t$$
- Retail:
$$MAR_t = OC_t + D_t + NGP_t + DC_t + RCR_t + KF_t$$

4

Methodologies

- t – Regulatory period
- OC_t – Operating costs: material costs, costs of salaries, production services costs and non-material costs
- D_t – Depreciation costs
- WACC – Weighted average cost of capital (7,5% real, pre tax)
- RAB_t – Regulatory asset base: intangible assets, real estates, facilities and equipment, excluding capital contributions (grants, assets acquired from building connections, etc.)
- OR_t – Other revenues: other revenues earned by employing RAB (revenues from transit, revenues earned through selling assets, etc.)
- KF_t – Correction factor
- L_t – Losses
- NGP_t – Costs of natural gas procurement
- TC_t – Costs of using the natural gas transport system
- SC_t – Costs of using the natural gas storage system
- RCR_t – Receivables collection risk (max. Wholesale 0,3%, Retail 2,0%)
- DC_t – Costs of using the natural gas distribution system

5

Methodologies

- Tariff elements (physical values):

- Transportation: "energy" (m^3) and "capacity" (m^3/day/year) (70% "energy" / 30% "capacity")

- Distribution: "energy" (m^3) and "capacity" (m^3/day/year) (70% "energy" / 30% "capacity")

- Wholesale: "energy" (m^3) and "capacity" (m^3/day/year)

- Retail: "energy" (m^3), "capacity" (m^3/day/year) and "delivery point" (number of the delivery points)

6

1

Tariff systems

- 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)

    (Tariff system for natural gas storage is in preparation)

7

Tariff systems

- Maximally allowed revenue, allotted on tariff elements, in tariff systems has been allocated on the customers (the group of customers) according to their consumption (quantity, capacity and connection point)

- This is how we ensure that prices for a specific system user / tariff buyer reflect objectively and transparently his impact on the operational costs of the energy company

8

Tariff systems

- Tariff rates (financial values):

- Transportation: "energy" (dinars/m^3), "energy for TSO" (dinars/m^3), and "capacity" (dinars/m^3/day/year)

- Distribution: "energy" (dinars/m^3) and "capacity" (dinars/m^3/day/year)

- Wholesale: "energy" (dinars/m^3) and "capacity" (dinars/m^3/day/year)

- Retail: "energy" (dinars/m^3), "capacity" (dinars/m^3/day/year) and "standing charge per delivery point" (dinars/delivery point/year)

9

Tariff systems

Natural gas distribution system – groups of system users:

Categories of system users	Groups of system users
"Category 1" (p < 6 bar)	"Households"
	"Other users"
"Category 2" (6 ≤ p < 16 bar)	"District heating systems"
	"Uniform consumption" (Q < 70% of consumption 01.10.-01.04.)
	"Uneven consumption" (Q ≥ 70% of consumption 01.10.-01.04.)

10

Tariff systems

Natural gas Retail – groups of buyers:

Categories of buyers	Groups of buyers
"Category 1" (p < 6 bar)	"Households"
	"Other buyers"
"Category 2" (6 ≤ p < 16 bar)	"District heating systems"
	"Uniform consumption" (Q < 70% of consumption 01.10.-01.04.)
	"Uneven consumption" (Q ≥ 70% of consumption 01.10.-01.04.)
"Category 3" (p ≥ 16 bar)	"District heating systems"
	"Uniform consumption" (Q < 70% of consumption 01.10.-01.04.)
	"Uneven consumption" (Q ≥ 70% of consumption 01.10.-01.04.)

11

Tariff systems

- Basic risk during the implementation of tariff systems:

- The lack of experience in the implementation of tariff systems

- Implementation of tariff systems:

- It is expected that the first energy entities price proposals calculated in accordance with these tariff systems will be submitted to the Agency on opinion by the end of this year. In the past several months the Agency has been intensively adjusting the energy companies data on which base are calculated prices in accordance with new tariff systems

12

THANK YOU FOR YOUR ATTENTION

Belgrade, Terazije 5/V
www.aers.rs
e-mail: aers@aers.rs

13