

# **Serbian Power Sector Current status**



**6<sup>th</sup> Partnership Activity  
PA PUC-AERS**

October 25 – October 29, 2010  
Harrisburg, Pennsylvania

# Serbian Power Sector – Energy Law

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Serbian Energy Law took effect in 2004

## ⇒ Changes in Serbian Power Sector

- Deregulation of potentially market activities (generation, supply)
- Regulation of transmission, distribution and supply of captive customers
- Restructuring of vertically integrated Serbian power utility PE EPS
- Liberalization (free choice of supplier)
- The Energy Agency of Republic of Serbia operational since 2006 (electricity, natural gas and oil)

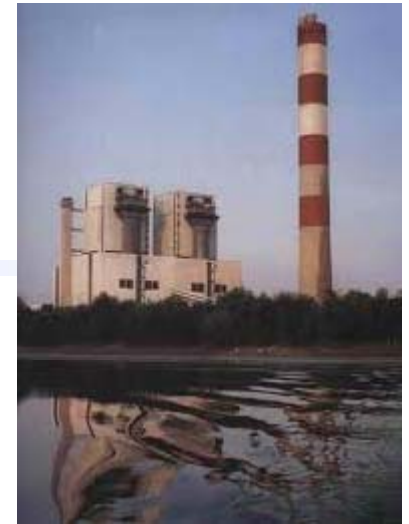
## ⇒ Objectives:

- Energy and economical efficiency
- New Investments incentive
- Implementation of international obligations (associated with energy and regional integrations) our country took over as part of the European Partnership and Stabilization and Accession process

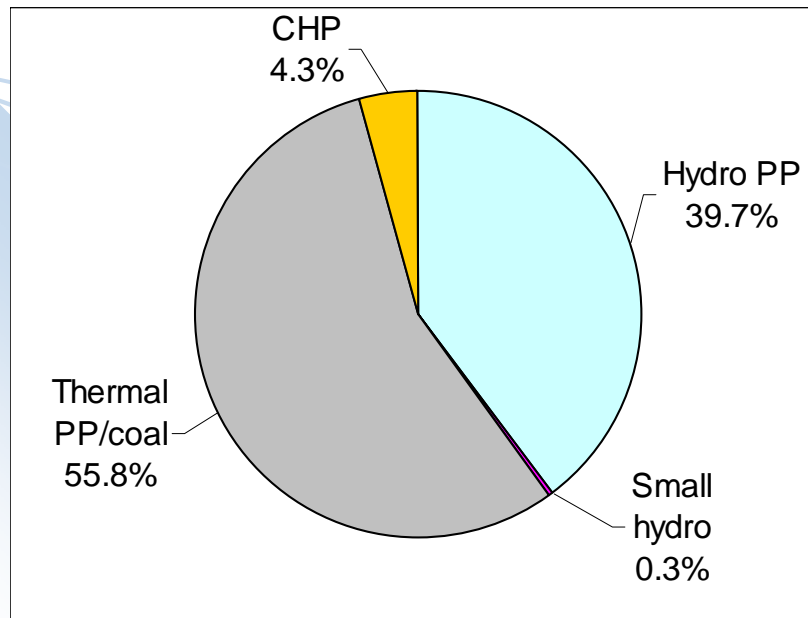
# Serbian Power Sector Generation

## Generation sector in 2010

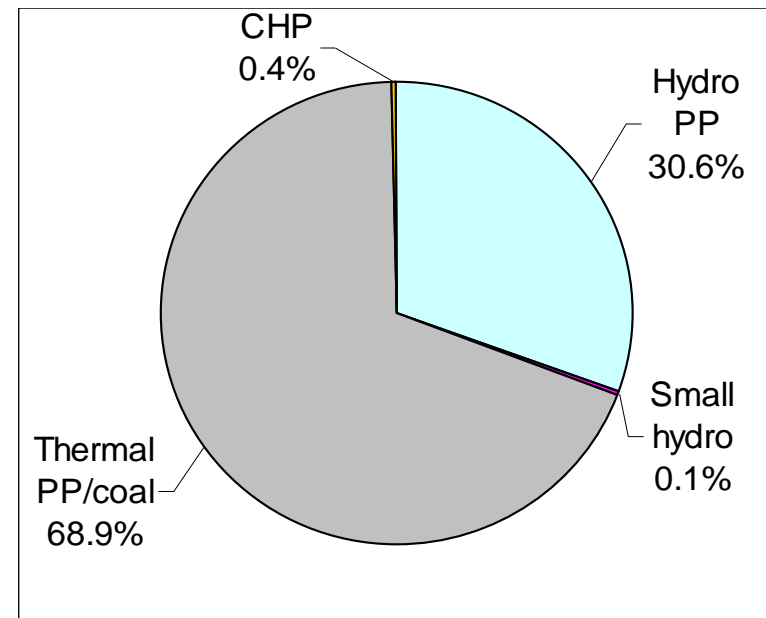
- 5 production companies operating within vertically integrated holding company PE EPS –Electric Power Utility of Serbia
- Mainly conventional PP
- Average ageing: TPP-31 years and HPP-37 years
- No new capacities



### Total installed capacity: 7,139 MW



### Total energy production: 36,113 GWh



# Serbian Power Sector – RES



## 2009- Legal framework:

- Decree on the Requirement for obtaining the Status of the Privileged Power Producers
- Decree on Feed-in Tariffs for RES-E
- No new capacities

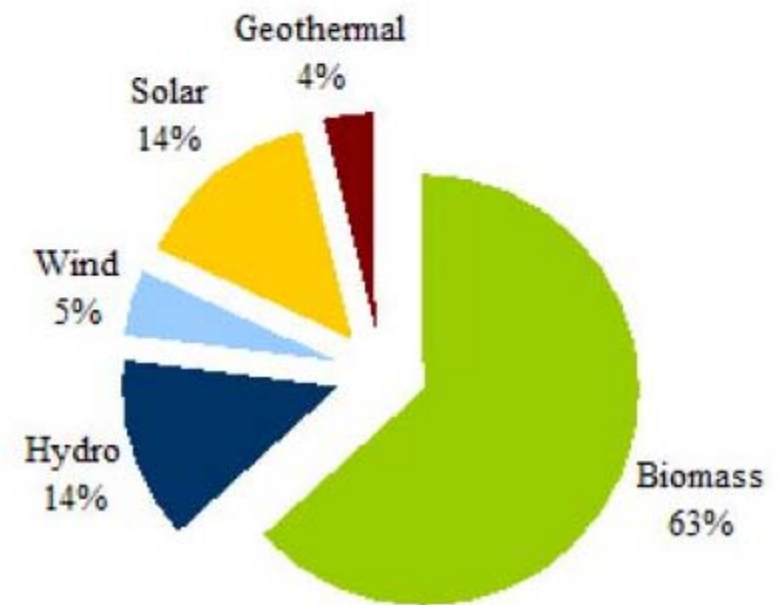
## 2009-2010- Energy permits issued:

- 21 for small hydro – 54.88 MW
- 9 for wind -1390.3 MW

## 2010- Privileged PP:

- 11 small hydro PP <1 MW

Potential: 4.3 million tons  
of oil equivalent



# Serbian Power Sector Transmission



## PE EMS Serbian Transmission System and Market Operator (TSMO)

- Independent company
- 100% state-owned by the Republic of Serbia
- Transmission asset owner

### Transmission network

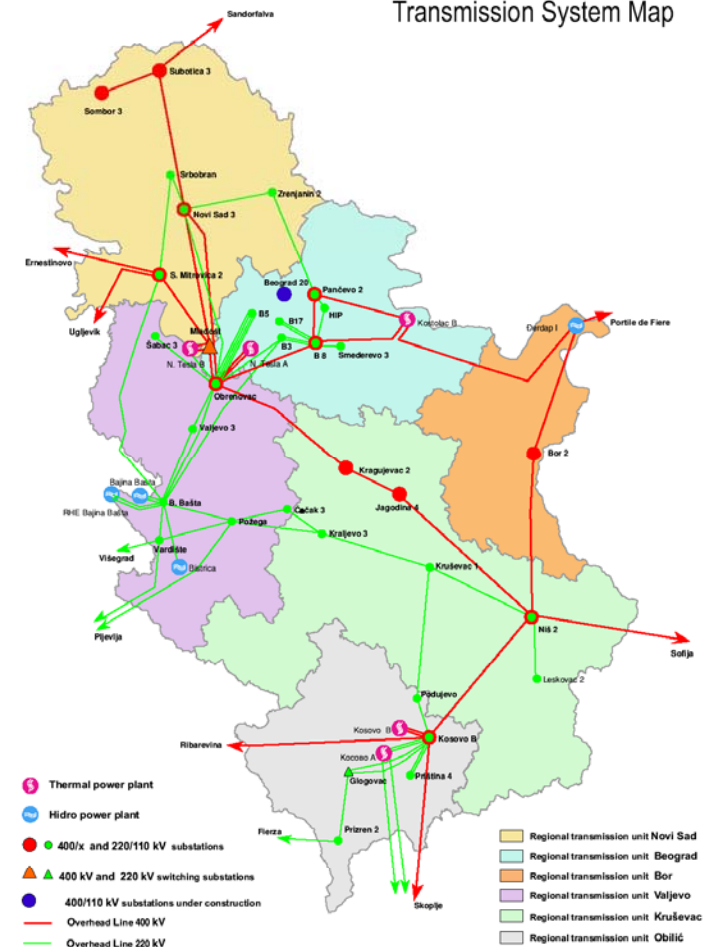
- 400, 220 and part of 110 kV network
- Installed capacity - 16,860 MVA
- Length of overhead lines – 8,931 km
- Delivered electricity – 40TWh
- Losses: 2.68%
- Reliability indicators close to EU average level
- 100% smart metering

### Grid Code

- Approved by AERS and published in 2008
- Preparing of amendments in progress

**Investments of \$550 mil. are planned until 2015!**

Transmission System Map



# Serbian Power Sector Distribution



## Electric Distribution Companies (EDC)

- 5 EDCs operating within vertically integrated holding company PE EPS –Electric Power Utility of Serbia
- Licensed for distribution and supply of tariff customers

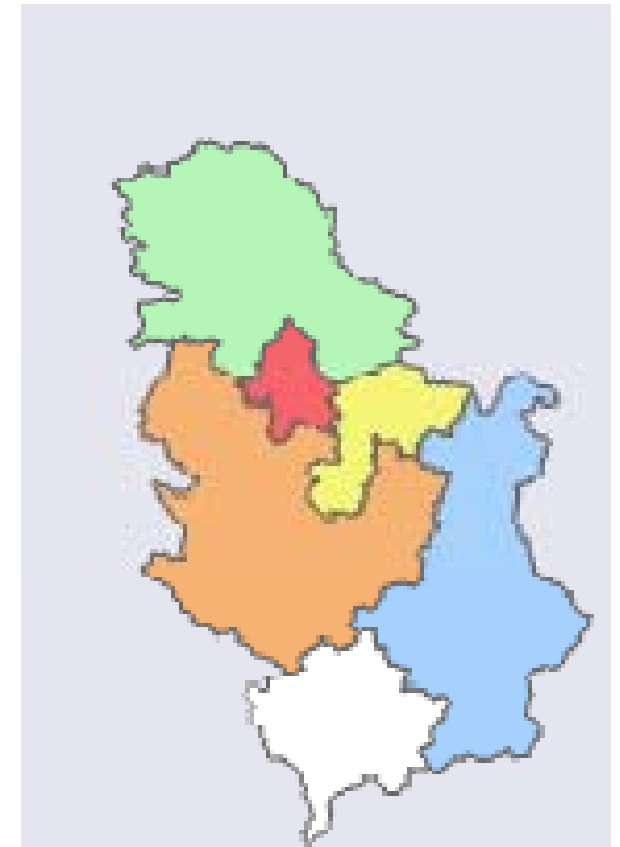
## Distribution network

- part of 110 kV and all 35, 20, 10 kV and 0.4 kV network
- Installed capacity - 25,413 MVA
- Length of overhead lines – 141,482 km
- Number of customers – 3.4 million
- Delivered electricity – 25 TWh
- Sold electricity – 27 TWh
- Losses increase – 15.19% (6.56% commercial -\$142 mil.)
- Collection rate decrease – 93.9% (97.41% in 2008)
- Reliability indicators much below EU averages
- 1.16% smart metering

## Distribution Code

- Approved by AERS and published in December 2009
- Initiatives for amendments already in place

⇒ **Distribution network needs improvements!**



# Serbian Power Sector

## Free Market

### Market Code

- PE EMS (TSMO) submitted draft Market Code to the AERS for approval
  - AERS gave opinion that draft Market Code is not in line with the Energy Law
- ⇒ Energy Law amendments prerequisite for the consent to the Market Code

### Wholesale market

- 45 licensed traders on the free market (wholesale, retail, export import)
- 23 actively participated in the market in 2009
- Mainly cross-border trading  
(6,883TWh in; 8,681 TWh out; 3,679TWh within Serbia) in 2009

### Allocation of capacity rights on the interconnections

- PE EMS (TSMO) in charge of the allocation procedure
- Allocation organized on 8 Serbian borders
- Yearly, monthly and weekly auctions
- 18 traders actively participated in the auctions in 2009 (prices 0.01-12.2 \$/MWh)

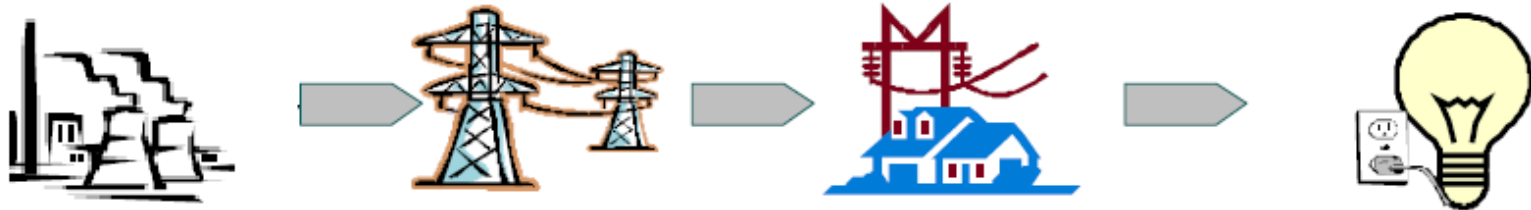
### Retail market

- 47% potential market opening (330,000 customers)
- 100% customers are on the regulated tariff
- No switching rules

# Serbian Power Sector

## Supply of captive customers

### Regulated tariff supply chain



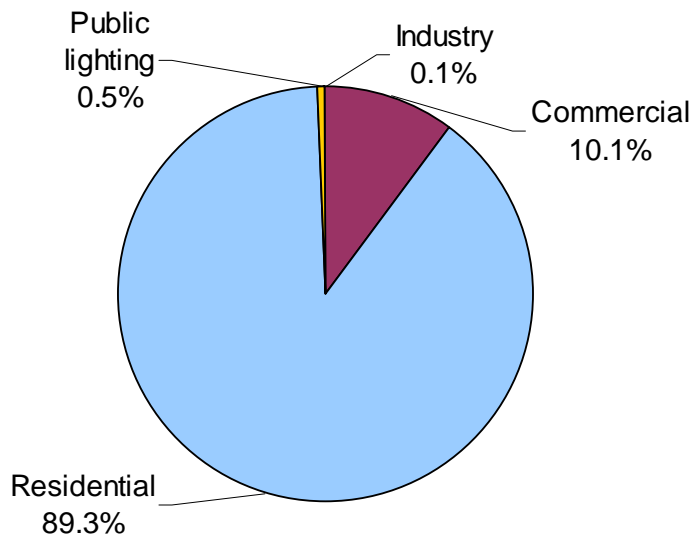
GENERATION

TRANSMISSION

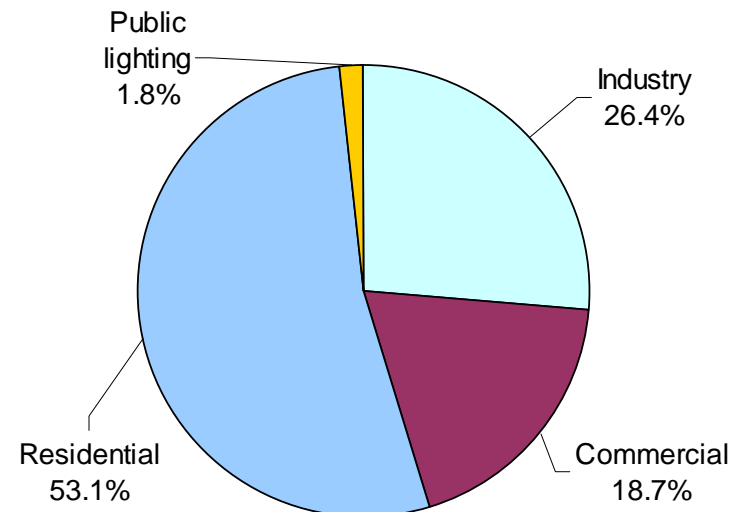
DISTRIBUTION

SUPPLY

**No. of tariff customers: 3,462,408**



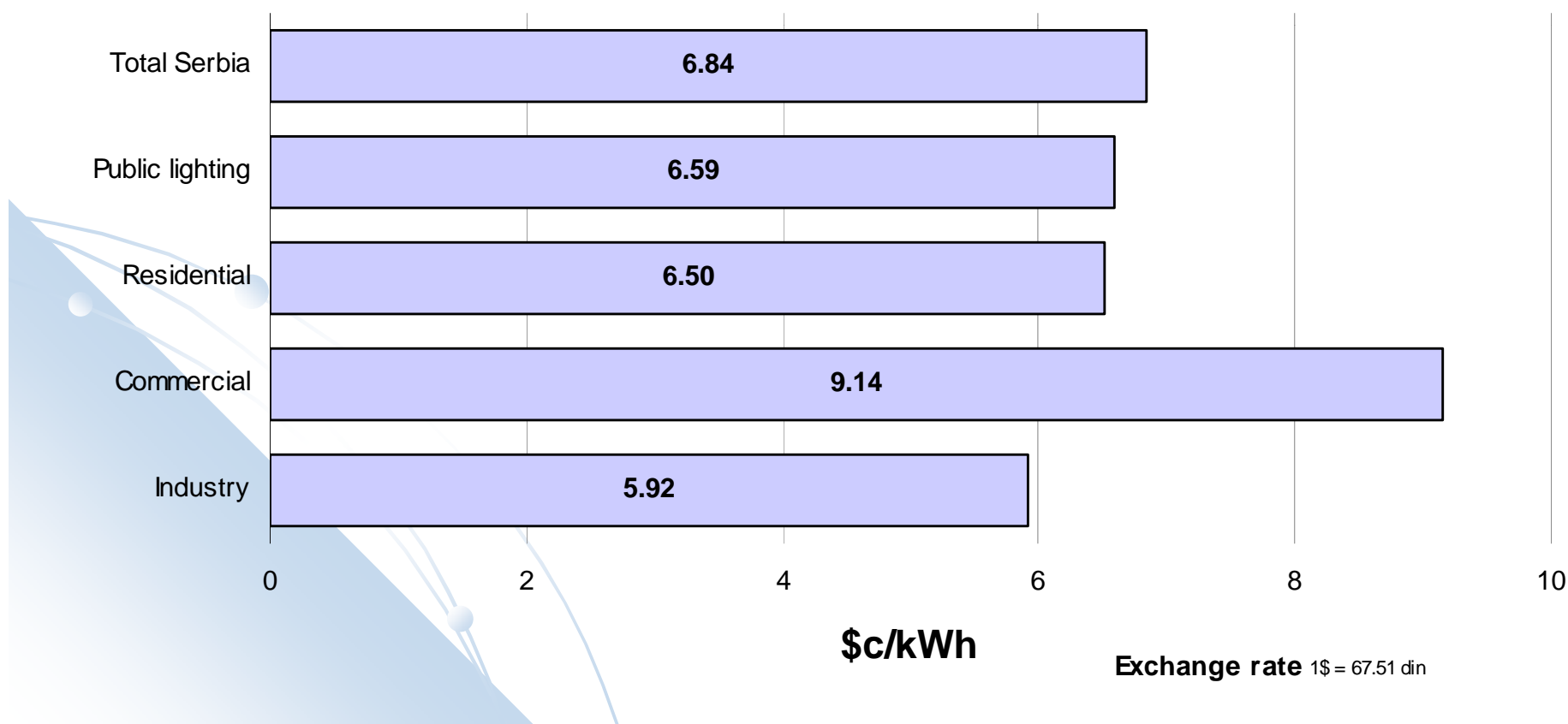
**Electricity supplied: 27,158,706 MWh/year**





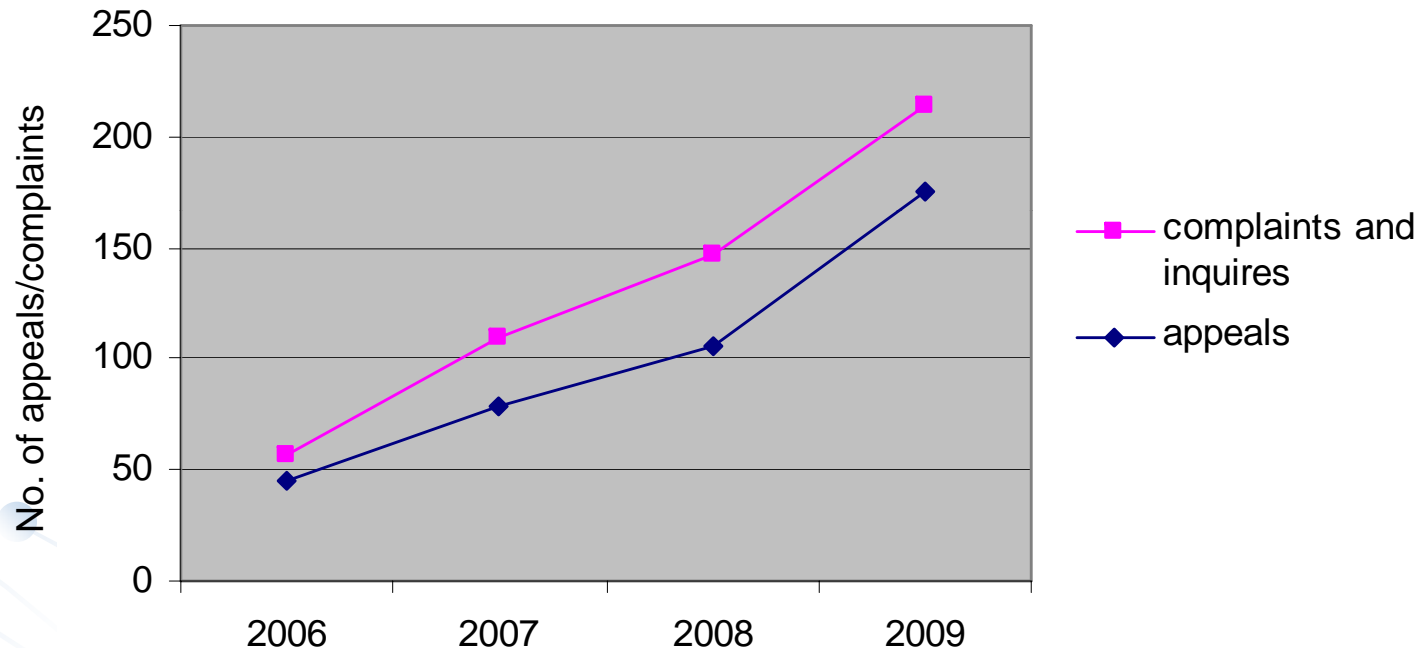
# Serbian Power Sector Prices in 2009

## Realized prices per customers' categories



# Serbian Power Sector

## Customers' complaints to AERS



- customers' appeals to connection and access to the system
- 95% of all customers' appeals were decided by AERS in favour of the customer

# Serbian Power Sector AERS activities

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AERS activities in the coming period:

- assistance in the Energy Law amendments preparation
- approval of the Market Code
- approval of The Grid and Distribution Codes amendments
- improvements of the pricing methodologies and tariff systems
- continuing service quality monitoring and regulation implementation
- monitoring energy activities and smart metering implementation process
- active participation in international activities



# Serbian Power Sector Energy Community

AERS activities in

Energy Community- ECRB working groups:

- Electricity Working Group
- Customer Protection Working Group
- South East Europe Coordinated Auction Office Implementation Group (SEE CAO IG)