

# Energy Market In The Function Of Sustainable Energy Development In Serbia

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- National Electricity and Natural Gas Market
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# **The Goals of Energy Sustainable Development**

# **The goals of sustainable development**

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## **Traditional targets:**

- Maximum security of supply with minimum costs
- Prescribed delivery reliability
- Prescribed quality of energy and services

## **The objective of sustainable development**

- Efficient use of non-renewable sources
- Increasing the share of renewable resources
- Increasing energy efficiency in generation, transmission and consumption

# How to achieve these goals

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- Protection measures application on existing TPP
- The construction of more efficient conventional PP
- Encouraging investments in PP based on RES and their integration into the system
- Encouraging distributed production
- Construction of new network elements and cross-border lines
- Development of smart grids, systems for measuring, monitoring and network operation
- Development of the electricity and natural gas market and market coupling

# More efficient use of primary resources

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- Generation capacities
  - replacement of old ones in order to increase lifetime
  - construction of more efficient new ones
- Networks
  - new network codes application - better network utilization
  - reduction of losses
- Final consumption side
  - more efficient devices
  - better prediction of consumption and impact on consumer habits
  - modern systems for measuring and smart grids
  - consumption management

# Improvement of Investment Condition

# **Improvement of Investment Conditions**

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## **Investors expectations**

- a certain return on investment within a reasonable time
- non-discriminatory market position

## **State and Regulator activities**

- legislative and regulatory framework
- identifying and removing obstacles and limitations
- stimulation of the desired development directions (such as feed-in tariffs)

# **Role of National Regulatory Authority**

# ROLE OF ENERGY AGENCY - NRA

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Ensuring:

- stable
- transparent and
- non-discriminatory regulatory framework for:
  - energy customers,
  - system users and
  - investors

# MARKET PARTICIPANTS - BASIC REQUIREMENTS

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- Free access to the network
- Equal position on the market
- Market development and market-coupling
- Market prices for all end customers

# NRA /1

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## Regulated networks - natural monopolies /1

NRA adopts:

- Methodologies for determination of the costs of connection to the network;
- Methodologies for determination of the price of access to the network
- Rules on supplier switching
- Rules on the quality of electricity and natural gas delivery and supply

## NRA /2

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### Regulated networks - natural monopolies /2

NRA shall give consent to:

- network codes and rules on operation of the natural gas storage system
- rules on cross-border capacity allocation
- TYDP for the transmission system with the investment plan;
- FYDP for the electricity distribution system with the investment plan
- plan for the takeover of metering devices in DS
- the compliance program for ensuring non-discriminatory behaviour

# NRA /3

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## Free market

What is free and what is regulated on the free market?

The price is free - the result of a negotiation or relationship between supply and demand.

Everything else is regulated and monitored.

## NRA:

Shall give consent to:

- market code
- the rules on publication of key market data (transparency)

..... and

Monitors the market and solves complaints

# Tariffs and prices

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## Regulated:

- network use-of-system charges
- prices of some ancillary services
- prices of public gas supply

and **temporarily**, until the conditions for the abolition are met :

- prices of guaranteed/public electricity supply
- prices of power reserve for secondary and tertiary control.

# Tariffs and prices /2

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NRA analyses the need for the regulation of prices based on:

- the accomplished level of protection of energy vulnerable customers
  - achieved competitiveness level in the domestic electricity market
  - development of the regional electricity market and
  - assessment of available cross-border capacities and
- prepare and publish a report on the need for the further regulation.

The first analysis, for 2017, was published on the Agency's website.

# **National Electricity and Natural Gas Market**

# BASIC ENERGY DATA - 2016

Electricity			Natural Gas		
Generation	GWh	36,781	Production	mil m <sup>3</sup>	399
Net export	GWh	1,353	Import (82%)	mil m <sup>3</sup>	1,807
Consumption	GWh	29,210	Consumption	mil m <sup>3</sup>	2,226
Industry & oth.	%	44.0	Industry, heating plants & oth.	%	86.6
households	%	48.3	households	%	9.5
small customers	%	7.7	small customers	%	3.9

# Market openness in 2016

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## **Electricity: 44%**

Licensed: 60 suppliers; 39 wholesale suppliers;

EPS Supplier is guaranteed and reserve supplier

14 active suppliers, EPS took 95% of the free market, and 13 suppliers only 5%; 97% of the total market

## **Gas: 86%**

Licensed: 65 Suppliers; 33 Public Suppliers;

Srbijagas Supplier is Supplier of Public Suppliers and Reserve Supplier

30 Suppliers were active, Srbijagas took 89% of the free market, 87% of the total market, bilateral contracts

# Switching Suppliers in 2016

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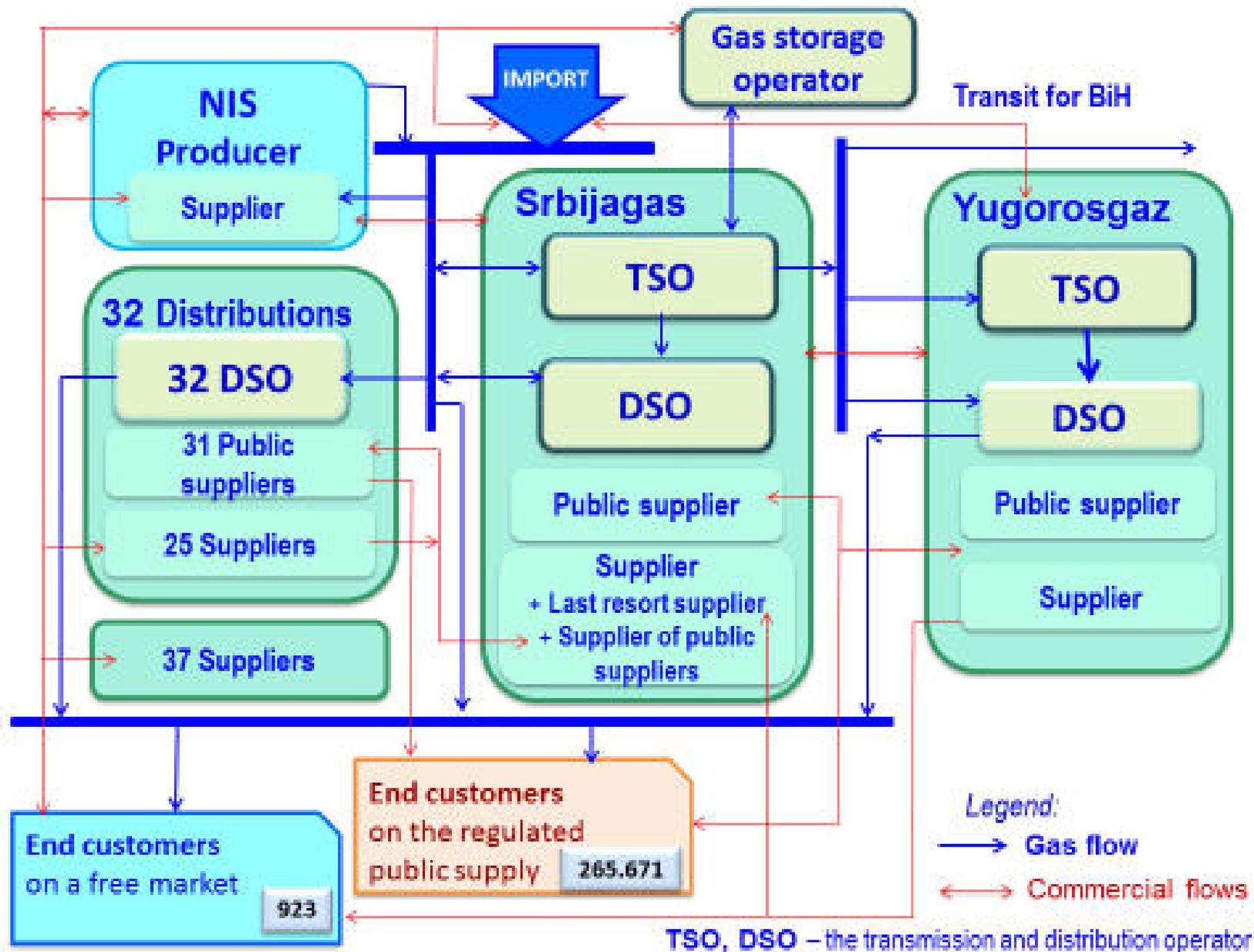
## **Electricity:**

12,000 (0.3%) measuring points,  
with 3.5% of final electricity consumption

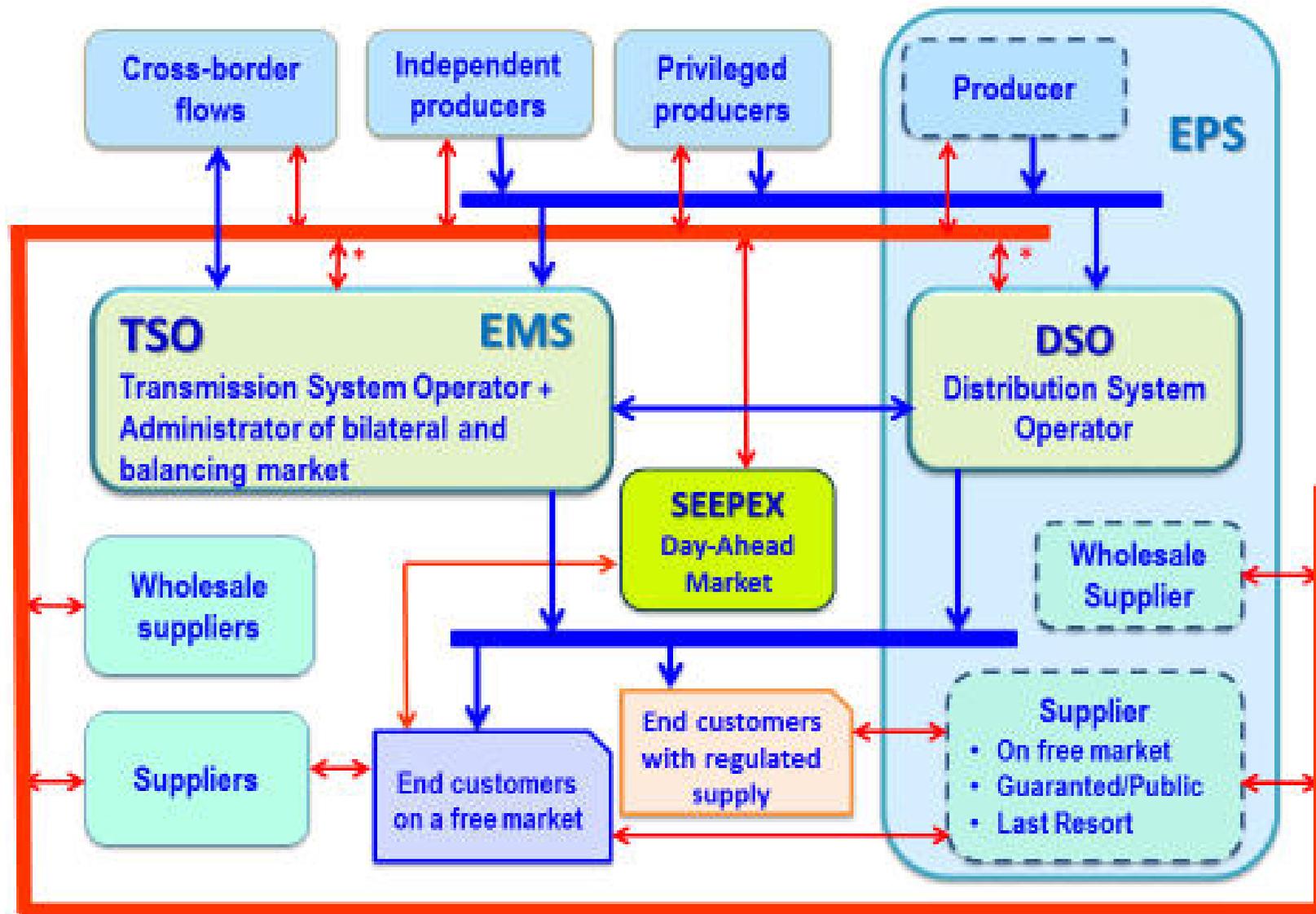
## **Gas:**

22 (0.008%) measuring points,  
with 3.7% of final gas consumption

# Serbian Gas Market Scheme 2016



# Serbian Electricity Market Scheme 2016



Legend:   
→ - Energy flows   
↔ - Energy Trading   
↔\* - Losses compensation

# SEEPEX - Organized Day-Ahead Market

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- **SEEPEX JSC** Belgrade ([www.seepex-spot.com](http://www.seepex-spot.com)) **started operating** in February 2016,
- SEEPEX (South-eastern European Power Exchange)
- **partnership between EMS JSC and EPEX SPOT** – France as a joint stock company with the majority ownership of the Serbian side with the approval of competent state bodies - EMS JSC holds 75% of the shares while EPEX SPOT holds 25%
- SEEPEX is a **licenced a Market Operator** on an organised electricity market/exchange
- It is planned to place standardized products with delivery on Day-Ahead and later Intraday within the Republic of Serbia and in the Region of the Southeastern Europe, wherever possible

# SEEPEX /2

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- Implemented solutions have been compatible with the Pan-European initiative for market coupling from the beginning
- In 2016, the scale of trade and the number of members of SEEPEX grew constantly
- In 2016, 13 participants were registered, 11 were active
- Total amount of electricity which was subject of trading at SEEPEX in 2016 was **533.3 GWh**
- The biggest Monthly Trade Volume of 94 GWh was realized in September, and Daily Trade Volume of 7.2 GWh on 06/09/2016
- The smallest monthly trade volume was realized in June amounted to 31.2 GWh
- The highest Hourly Price was realized on 19/12/2016 at 18 CET amounted to 93.63 €/MWh
- The Average Price on the annual level was 34.75 €/MWh
- The operations of SEEPEX ensure a transparent and ever more reliable mechanism for the establishment of reference wholesale price in the region

# **BASIC DIRECTIONS OF FURTHER DEVELOPMENT**

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- **ELECTRICITY:**

- Sector structure - independence of the DSO
- New capacities building
- Coupling of Organised Day-Ahead Electricity Markets with at least one neighbouring country
- Introduction of a Coordinated Capacity Calculation Process for the Allocation of Day-Ahead capacities based on a Regionally Coordinated Congestion Forecast

- **GAS:**

- Sector structure - independence of the TSOs
- Grid Code application - Capacity allocation, Balancing...
- New capacities building
  - New interconnectors: Bulgaria, Romania, Croatia
  - Underground storages capacity increase : II Phase of Banatski Dvor, new one

# Electricity Market Coupling Plans

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- **Tasks/Priorities:**

- Ensure Liquidity of the domestic electricity markets by appropriate regulatory measures
- Coupling of Organised Day-Ahead Electricity Markets with at least one neighbouring country
- Introduction of a Coordinated Capacity Calculation Process for the Allocation of Day-Ahead capacities based on a Regionally Coordinated Congestion Forecast

- **SEEPEX Initiatives for Market Coupling:**

- 4MMC (Czech Republic + Slovak Republic + Hungary + Romania)
- Italy – Montenegro - Serbia (via submarine cable)

# WESTERN BALKANS 6

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## WB6: 5 +KiM\*

- Full implementation of the 3<sup>rd</sup> EU Energy Package
- Independence of the regulator
- Separation and independence of network operators
- Deregulation of supply prices
- Co-ordinated allocation of cross-border capacities (JAO, CAO)
- Development of Balance Energy Market
- Development of day-ahead EE market and linking with other stock exchanges

*Thank you for your attention!*



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