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Why an electricity market?

Legal Obligations Requiring BiH to Develop its Electricity Market

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The Market Needs New Capacity

- The Region will need an additional 11 GW – 18 GW (BiH 4 GW) in the next 15 years
- BiH needs new capacity in the period 2011-2013
- Wholesale electricity prices have equaled the prices for tariff customers
- In 2006, BiH had a net balance of about +2200 GWh (19% of BiH consumption)
- 6 months 2007 net balance -17 GWh (hydro 49 % out of planned)

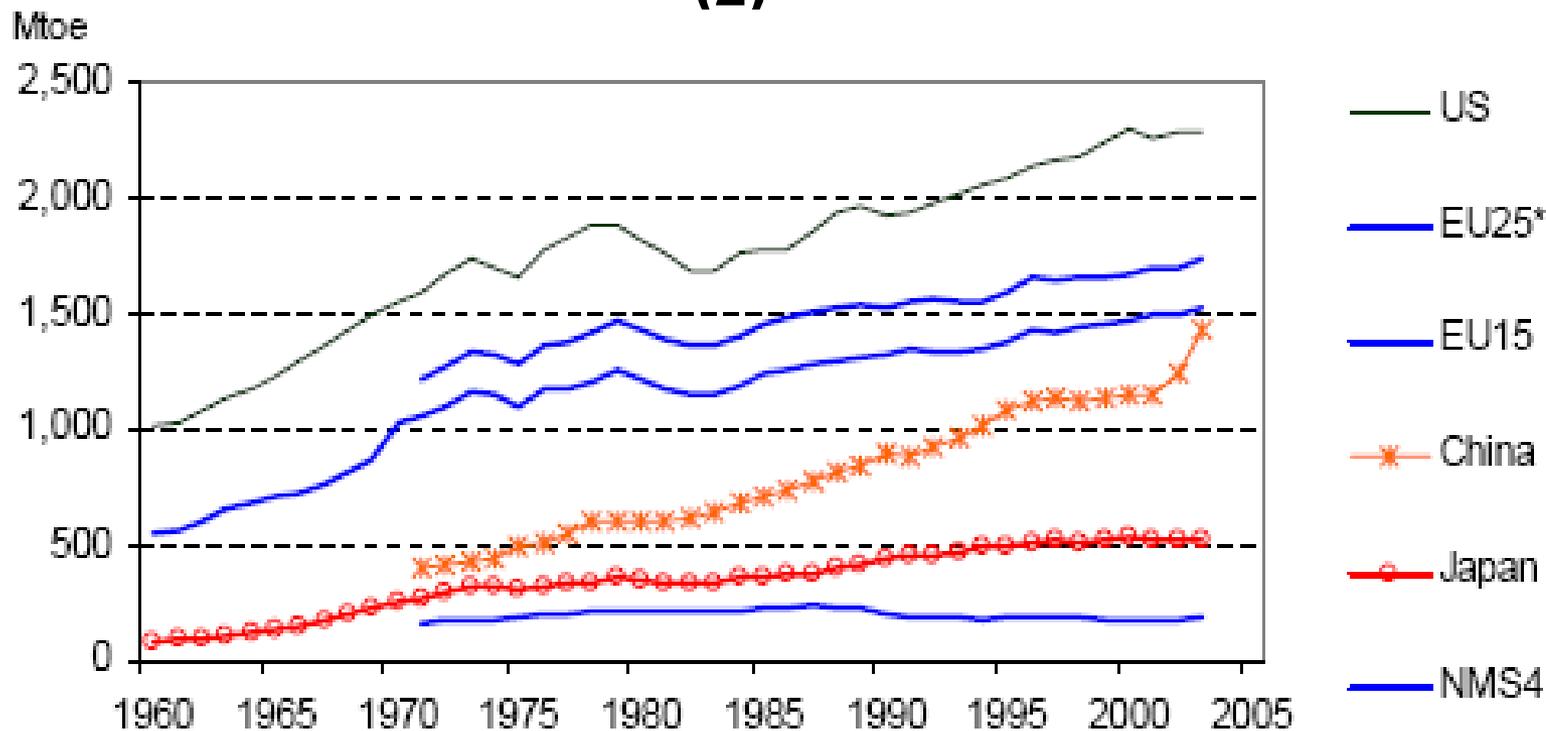


Energy as a key factor of development (1)

- Global energy consumption has nearly doubled since 1970
- EU 25: increase by 1,1%/year
- USA: increase by 1,1%/year
- Japan: increase by 4%/year
- China: since 2002 until present, increase by around 50%



Energy as key factor of development (2)

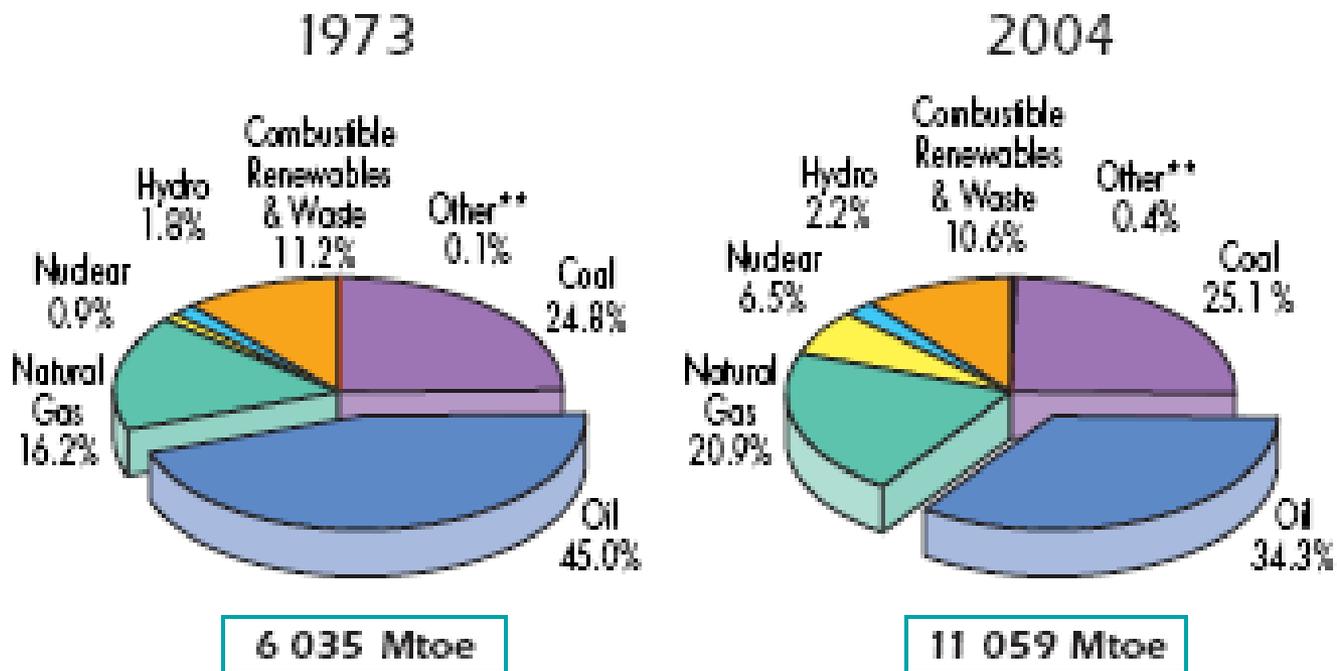


Source: IEA, own calculations

NMS4 = Czech Republic, Hungary, Poland, Slovakia

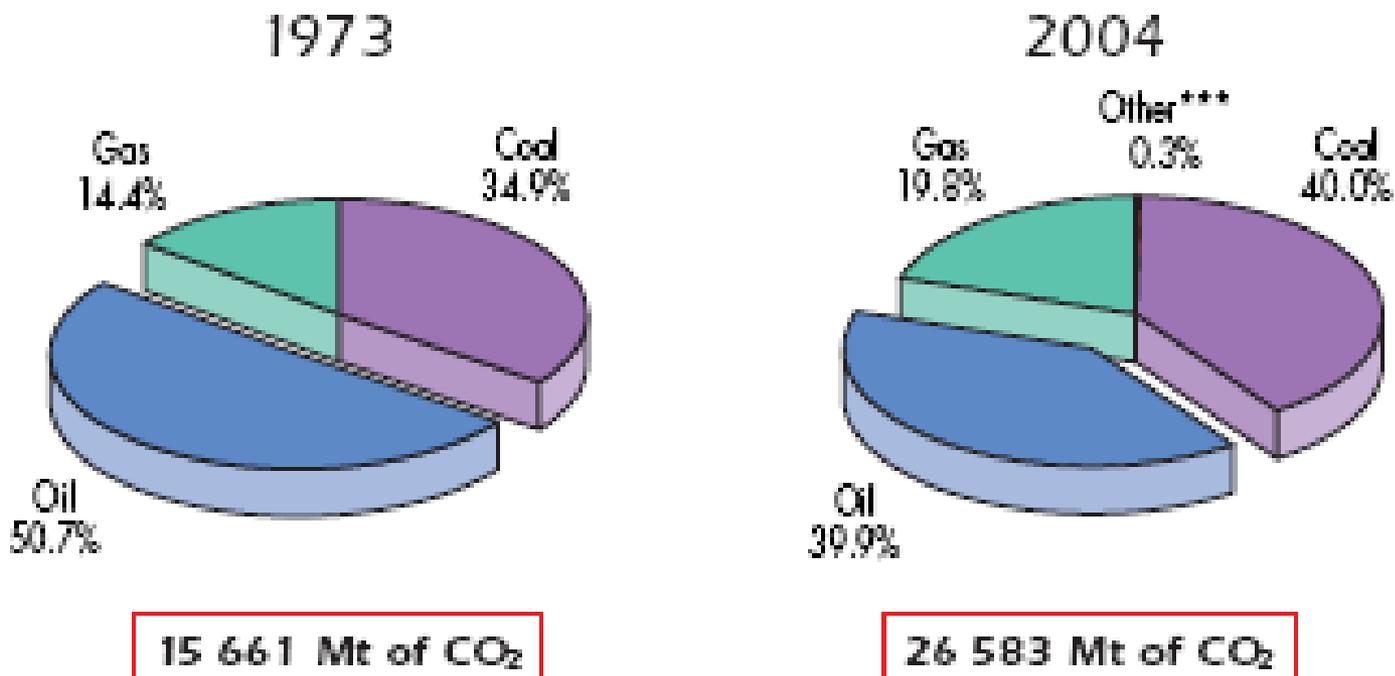


Energy as key factor of development (3)



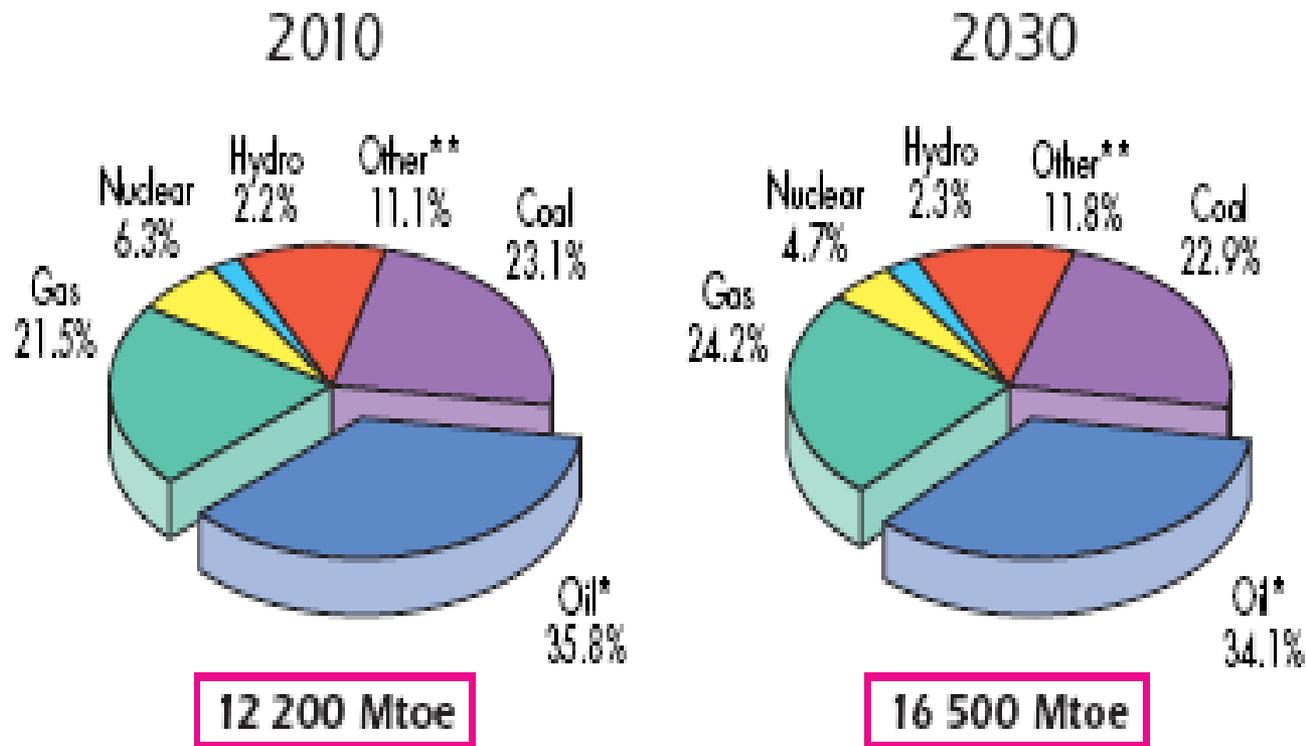


In 30 years CO₂ emission increased by 70%



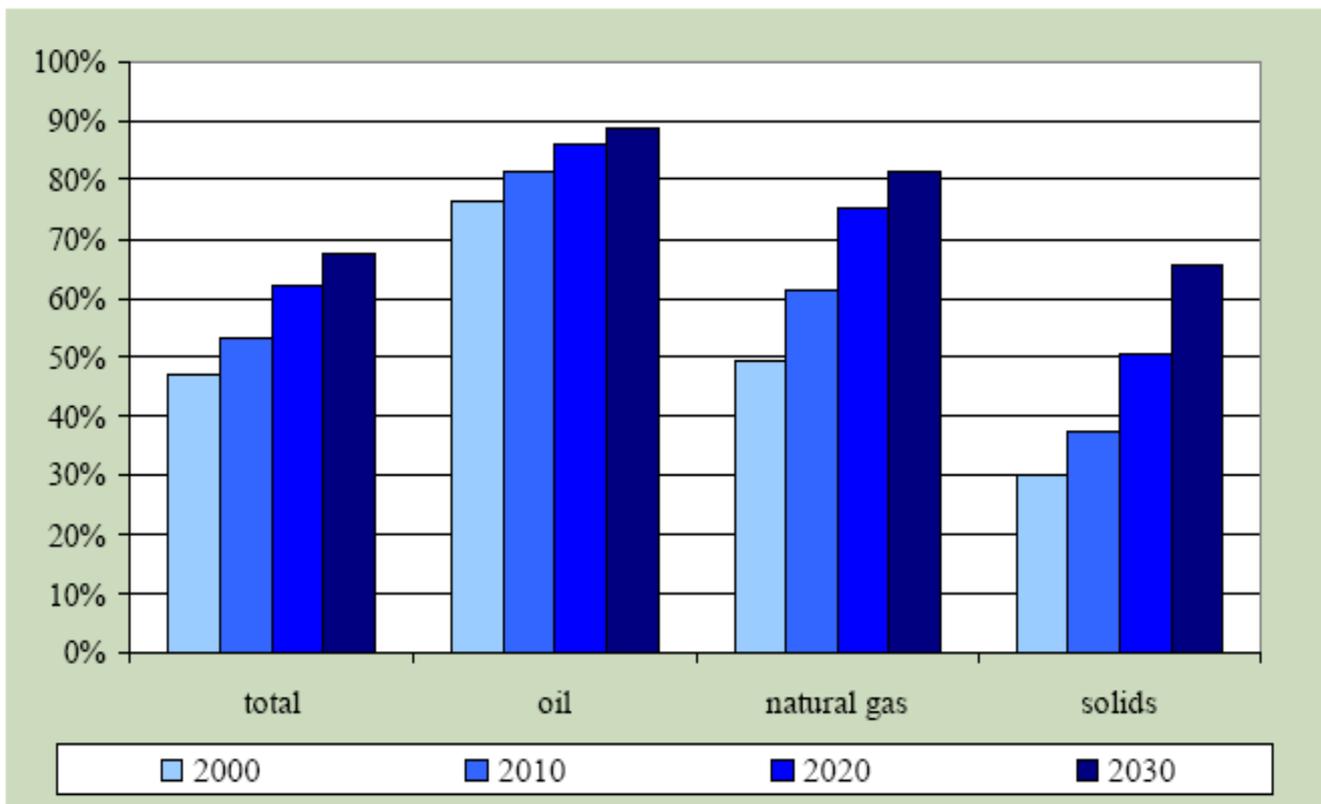


In 20 years primary energy consumption to increase by more than 50%





EU to increase energy dependence to 70% by 2030





Increased energy dependence means:

- Increased costs for the needs of energy import
- Increased energy dependence on exporting countries (Russia, Middle East, Northern Africa)
- Exposure to primary energy source price variations
- Undermined competitiveness of domestic products in the world's market



Power energy consumption in the EU will see the highest increase in the coming period

- Growth of electricity consumption by around 51% by 2030
- Necessary to construct nearly as many new power plants as their current capacity (around 730 GW)
- Out of installed 730 GW around 60% needs to be replaced
- Around EUR 800 billion investments



Europe facing a new energy era

- Urgent investments to energy sector needed
- Energy dependence of Europe will be growing unless appropriate solutions are found
- Primary energy sources are concentrated in a smaller number of countries, e.g. gas in Russia, Algeria and Norway
- Global demand for energy sources is growing; CO₂ emission is growing as well
- Gas and oil prices and electricity prices are growing
- The climate is warming and will get warmer if the same trend of pollution continues
- Safety and technical and economic maximum of energy supplies is a precondition for a favorable business climate and living standards



6 priority areas for the EU

1. **Establishment of internal power and gas market;**
2. **Solidarity in energy supplies among EU member-states;**
3. **Development of more efficient, self-sustaining supplies and a diverse energy mix;**
4. **Joint climate change policy;**
5. **Joint development of new technologies in energy sector;**
6. **Joint international/external energy policy;**



Foundation of power and gas market

- **Open, business competition-based market will ensure self-sustaining, safe and competitive supplies**
- **Introduction of competitiveness increases business efficiency**
- **Interlinked markets reduce costs of expensive reserve capacities**
- **Competition means also a better use of available resources**
- **Competition means improvement of services provided to customers**



EU documents related to the founding of a market

The basic documents:

- Directive No. 2003/54/EC which defines the founding of a common power market and the organization and role of power sector participants.
- Regulation (EC) No. 1228/2003 on conditions for access to the network for cross-border electricity exchanges.
- Directives pertaining to protection of environment: 1999/32/EC; 85/337/EEC; 2001/80/EC



Joint international/external energy policy

- Development of Trans-European Energy Community
- Enlargement of energy market through gradual development of the markets in the EU neighboring countries and the region
- Gradually moving forward to and integration in the EU market
- Creation of a single regulated zone
- Application of the same market performance principles across all of Europe in terms of trading, transit, and protection of environment
- Mutual harmonization and integration of the market
- Market becomes transparent, predictable and attractive for investments and further growth
- Increased supply security for both the EU and neighboring states.



SEE Energy Community



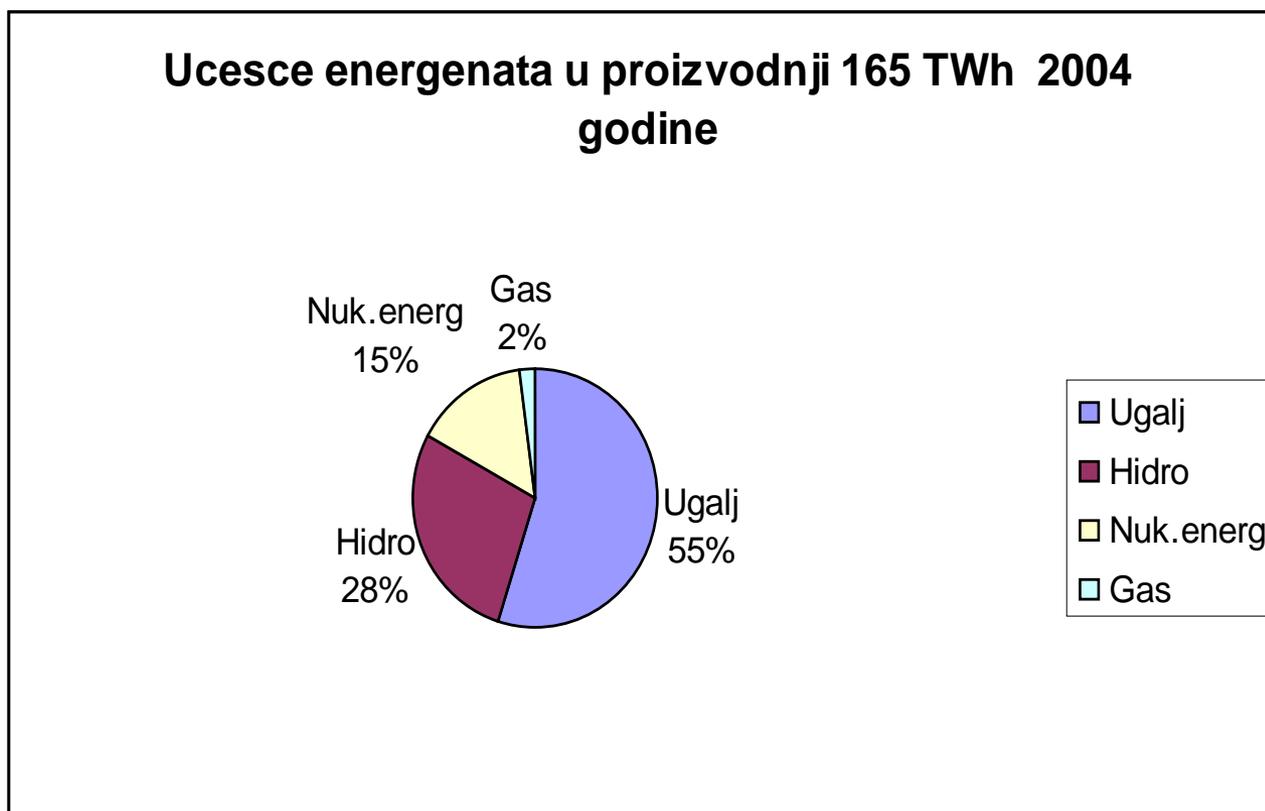


Region as a market

- Around 55 million citizens
- Overall GDP in the region around US\$ 110 billion
- The region spends around 100 Mtoe of primary energy sources
- Germany spends 345 Mtoe, Czech Republic 44 etc.
- Oil import and gas (mainly)
- The region's import dependence of primary energy sources exceeds 50%.



Production of electricity in the region shares of energy sources in production of 165 TWh in 2004





Electricity in the region by 2020

- If electricity consumption increases by 2,5% and GDP by 3-4%, it is assessed that*:
 - Consumption in 2020 will be 235 TWh (over 40%)
 - Maximum 38 GW power, in comparison to current 27 GW (40%)
 - Consumption per capita will increase to 3,832 kWh from the current 2,500 kWh (53%)
- In order to meet the demand, it is necessary:
 - To rehabilitate 11.000 MW production capacities by 2020
 - To construct new 11,500 MW production capacities by 2020

**Generation Investment Study*



Required funds and their provision

- Total investments in the power (and gas) sector in the region in the amount of EUR 26-30 billion or around EUR 2 billion per year*
- How will it be possible to ensure the required funds?
- «Opening» of the sector for investors through establishment of an open, transparent and attractive market

**Generation investment Study*



Private investors ‘prefer’ markets which are:

- Politically and economically stable
- The market which brings the appropriate profit and return on investment
- Need for the reform of (power) energy sector for the purpose of:
 - Opening the electricity market, i.e. the establishment of a transparent and non-discriminating market for all participants
 - Establishment of the appropriate tariffs which will make investment sufficiently attractive
 - Establishment of transparent and non-discriminating tender procedures for the construction of new capacities
 - Establishment of a sufficiently large market which would be attractive to investors



ECSEE-Energy Community South East Europe

- Countries of the region and UNMIK/Kosovo (UN R 1244) signed:
 - The Athens MoU in 2003
 - Energy Treaty in 2005, i.e. internationally binding document on the formation of the ECSEE-Energy Community South East Europe
- Signatories committed themselves to:
 - Establishing a regional electricity and gas market, defined by law and regulation, and harmonized



Reasons for the establishment of the Energy Community

- The market ‘is focusing’ on the construction of technologically and economically optimal capacities and thereby optimization of electricity generation costs
- Big markets are attractive to investors
- Integrated market enables optimal use of production capacities with different structures and thereby optimization of labor costs in the overall power system
- The market ‘requires’ improvement of effectiveness of performance of power supply companies
- Regulated and attractive market attracts investors
- Bigger systems ensure increased security and reliability of power supplies



Reasons for the establishment of the Energy Community (continued)

- Regulated and functioning regional market enables improvement of overall political and economic relations among countries
- The market which is based on optimization of construction of new capacities enables optimization/saving of natural resources and a higher level of the system of environment protection
- Individual markets in West Balkans are too small to be able to support significant investments in gas and electricity sectors without a firm legal basis for export and transit
- Individual markets are also small from the aspect of the European market institutions; this is why it is necessary to build regional market institutions.



Reasons for the establishment of the Energy Community (continued)

- Since the signatories are countries in transition, political risks of investment exist
- Mutual energy dependence of the countries in the region
- It is necessary to establish firm legal bases for mutual relations under the sponsorship of the authorities outside the region
- It is necessary to enable transfer from national to regional power energy development policy



Establishment of Energy Community of Sourt-East Europe

- For the above reasons, the European Union, on the one hand, and the following Contracting Parties, on the other:
 - The Republic of Albania, The Republic of Bulgaria, Bosnia and Herzegovina, The Republic of Croatia, Former Yugoslav Republic of Macedonia, The Republic of Montenegro, Romania, The Republic of Serbia, and Interim Administration of the United Nations in Kosovo under Resolution 1244 of the United Nations Security Council,
- Signed the Energy Community Treaty



Basic documents from which the BiH obligations toward establishing the market arise

- *ENERGY COMMUNITY IN SOUTH-EAST EUROPE TREATY*
- *Law on Transmission, Regulator and Electricity System Operator in BiH*
- *Law on Electricity, F BiH*
- *Law on Electricity, RS*



Law on Transmission, Regulator and Electricity System Operator in BiH defines:

- SERC responsible for the formation and maintenance of competitive markets
- Electric power market as a single economic space
- The market is opened in accordance with the laws and regulations defining conditions, scope and schedule of market opening
- Intention to enable and accelerate the creation of electric power market in BiH



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Law on Electricity of FBiH defines:

- Establishment of market on the basis of SERC documents
- Establishment of market participants in FBiH (including the status of eligible customer)



Law on Electricity in RS defines:

Opening of the market through defining the status of eligible customer/through establishment of the electricity consumption threshold for an eligible customer



Law on Electricity of FBiH defines:

- Establishment of market on the basis of SERC documents
- Establishment of market participants in FBiH (including the status of eligible customer)



Decision on scope, conditions and schedule of electricity market opening in BiH

- On the basis of domestic and international documents (law and treaties) SERC issued in June 2006 a decision on the scope, conditions and schedule of electricity market opening in BiH
- The decision defines conditions for the market opening and the pace
- Entity regulators defined the pace of opening the markets in the entities through the Book of Rules for Acquisition of the Status of Eligible Customer



DECISION ON THE SCOPE, CONDITIONS AND SCHEDULE OF ELECTRICITY MARKET OPENING IN BOSNIA AND HERZEGOVINA

- From January 1, 2007, all customers with annual consumption over 10 GWh
- From January 1, 2008, all customers whose annual consumption exceeds 1 GWh (entities: all customers except households)
- From January 1, 2009, all customers except households
- Since January 1, 2015, all electricity buyers



Conditions for market opening

- Establishment of transmission operator, distribution system operator and unbundling of electricity operations
- Establishment of the rules which ensure free and equal third party access to transmission and distribution network (grid rules) and rules which ensure balanced system operation under open market conditions (market rules)
- Establishment of grid tariffs (for transmission and distribution services) and tariffs which refer to system management



ELECTRICITY MARKET: CHALLENGE AND OPPORTUNITY FOR BiH

- Bearing in mind reasons for establishment of Energy Community
- Understanding significance of electricity in the overall social and economic life
- Bearing in mind natural resources in BiH
- Understanding the necessity for harmonization of development policies with human environment protection