



**JP ELEKTROPRIVREDA BiH**

—— d.d. - Sarajevo ——

## **EP BiH Plans in the context of EU energy policies**

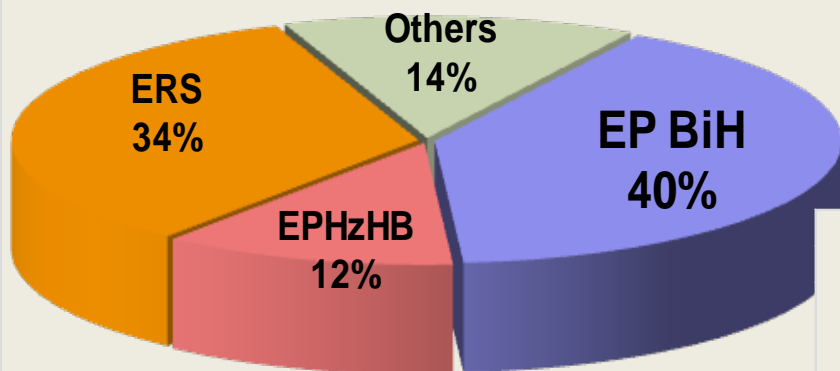
1. EP BiH
2. Business policy and goals of EP BiH
3. Plans and projections
4. Summary

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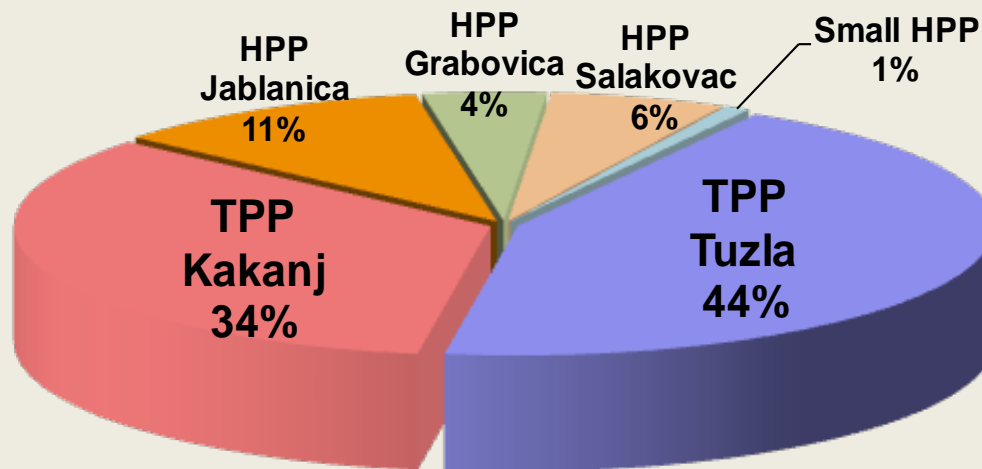


Production in BiH - 2018

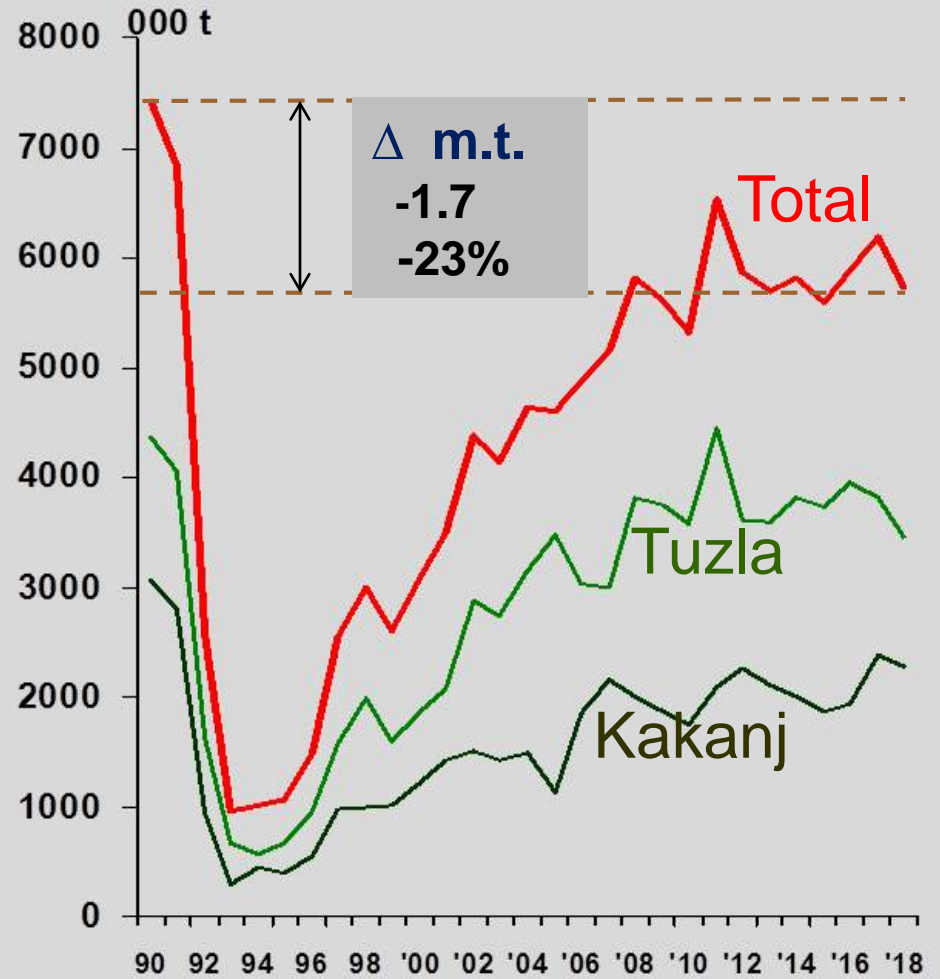
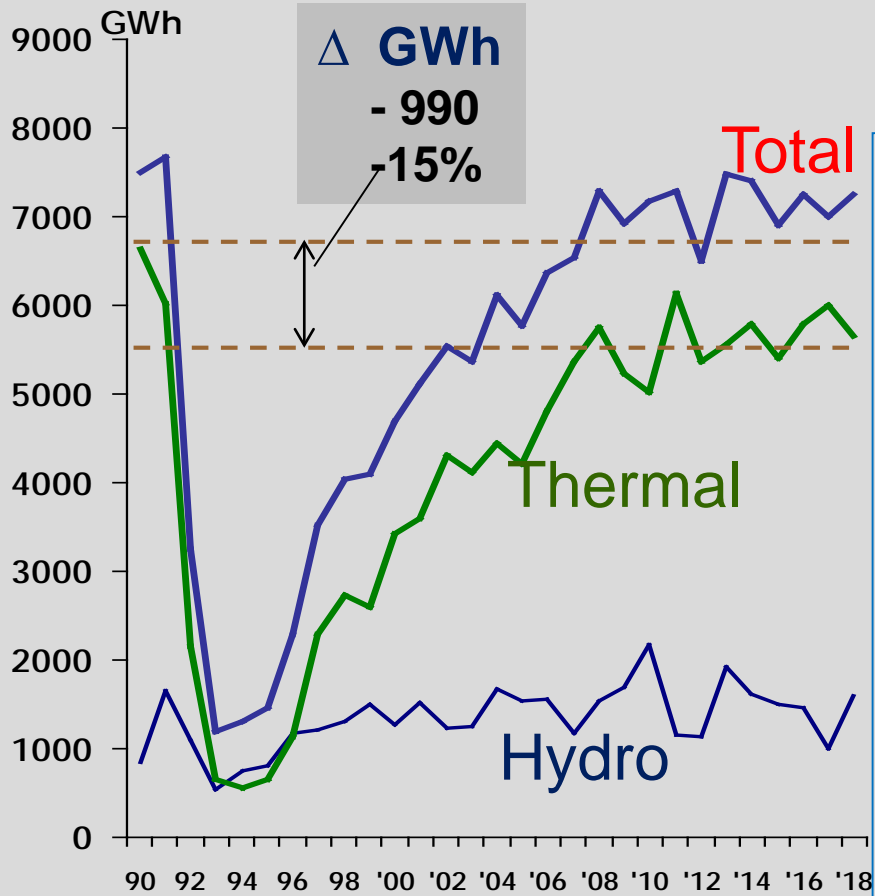


Hydro: **39%**  
Thermal: 61%

Production structure EP BiH in 2018



Hydro: **22%**  
Thermal: 78%





## Business Policy of EP BiH = EU en. policy

Reasonable and achievable balance between:

- Security of supply (import dependency)
- Competitiveness (economic growth)
- Sustainability (environmental concerns)

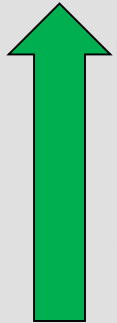
taking into account the specific conditions in BiH and its financial capacity and the economic situation, as well as obligation to ensure affordable energy



## Focus of the EU acquis

- Reducing dependence on imported energy
- Mitigation of environmental impacts
- Consumer interest and protection

- **Security**
- **Independency**
- **RES**
- **Efficiency**



- **Affordable and reliable energy**



- **Fossil fuels**
- **Emissions limit**
- **Decarbonisation (CO<sub>2</sub>)**





## Business Policy of EP BiH = EU en. policy

- RES increase  
(intensive investment: hydro, wind, solar, biomass and purchase RE)
- Coal reduction  
(termination of use of old units, reducing working hours, efficiency improvement, cogeneration – district heating)
- Consumer protection and satisfaction  
(security, quality, prices, social sensitivity)



## Financial capacities and the economic situation

- Intensive investments are necessary if these goals are to be achieved and to achieve economic growth, sustainable development and employment
- But, investment is limited by financial capacities and capabilities in terms of indebtedness and debt servicing



## Financial goals

In order to reach the required financial capacity, it is necessary to achieve the financial objectives:

- increase in profit and return on equity
- maintaining the required liquidity and indebtedness indicators

In case of the EP BiH it primarily means:

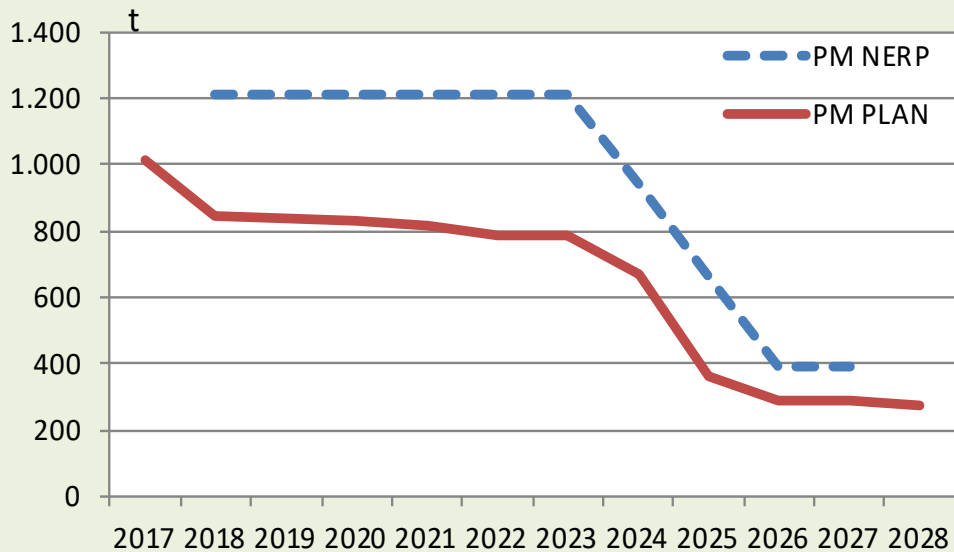
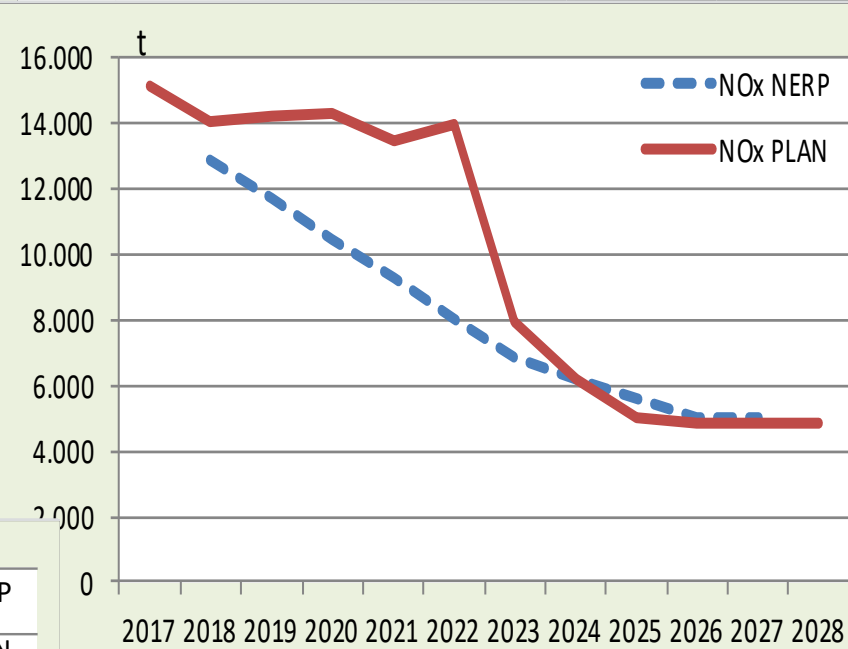
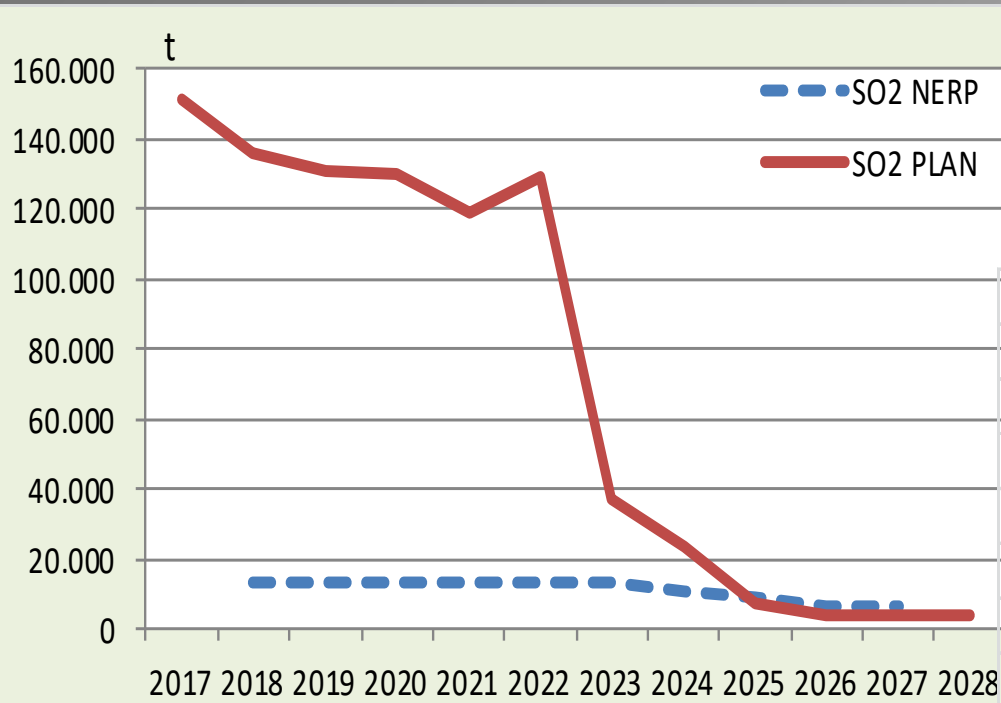
- productivity improvement,
- supply of consumers at market prices (in particular households)
- implementation of the aid scheme for vulnerable categories





		actual		PLAN - EE Balance /proj.			
		2017	2018	2019	2020	2021	2021/2017
Thermal	GWh	6007	5648	5358	5299	4822	
	ann. reduction %		<b>-6,0%</b>	<b>-5,1%</b>	<b>-1,1%</b>	<b>-9,0%</b>	<b>-19,7%</b>
Hydro	GWh	1002	1597	1483	1493	1517	<b>51,4%</b>
Wind	GWh				40	120	
RES purchase	GWh	111	106	142	147	147	<b>32,4%</b>
<b>Available</b>	<b>GWh</b>	<b>7120</b>	<b>7351</b>	<b>6983</b>	<b>6939</b>	<b>6486</b>	<b>-8,9%</b>
RES	GWh	1113	1703	1625	1680	1784	
	RES share %	<b>16%</b>	<b>23%</b>	<b>23%</b>	<b>24%</b>	<b>28%</b>	<b>60,3%</b>
Coal consumpt.	000 t.	6188	5724	5507	5470	5198	<b>-990</b>
	ann. reduction %		<b>-7,5%</b>	<b>-3,8%</b>	<b>-0,7%</b>	<b>-5,0%</b>	<b>-16,0%</b>

### 3. Plans and Projections NERP Projections - Emissions



Remaining work hours:

Tz G3-100 MW	17,052
Tz G4-200 MW	16,720
Tz G5-200 MW	40,740
Kak G5-110 MW	13,663



EE Balance		2017	2020	2025	2030	2035	2025/17	2030/17	2035/17
Production EP BiH Total	GWh	<b>7.009</b>	6.831	7.482	7.744	<b>8.631</b>	7%	10%	<b>23%</b>
RES EP BiH	GWh	1.002	1.533	1.907	2.216	3.103	90%	121%	<b>210%</b>
<b>RES %</b>	%	<b>14%</b>	22%	25%	29%	<b>36%</b>			
RES purchase	GWh	111	147	167	192	217	50%	73%	<b>95%</b>
Available	GWh	7.120	6.978	7.649	7.936	8.848	7%	11%	<b>24%</b>
RES total	GWh	1.113	1.680	2.074	2.408	3.320	86%	116%	<b>198%</b>
<b>RES %</b>		<b>16%</b>	24%	27%	30%	<b>38%</b>			

EU 28 in 2017  
Fossil 48%  
Nuclear 26%  
**RES 26%**

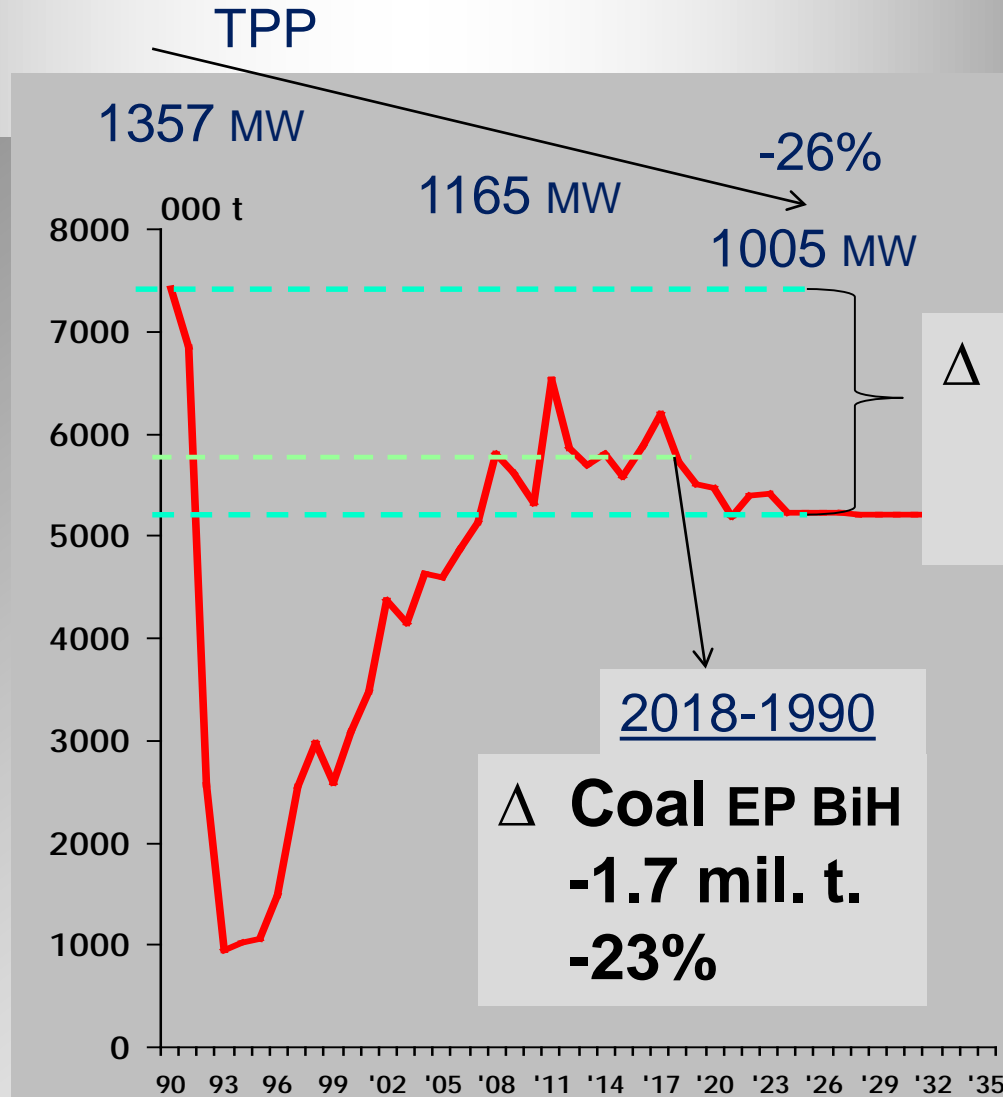
○ Based on the assumptions:  
6 new HPP (234 MW)  
6 small HPP (51 MW)  
6 new WP (233 MW)  
4 thermal units in operation



	000 t
⇒ <b>1990</b>	<b>7416</b>
⇒ <b>2011</b>	<b>6522</b>
⇒ <b>2017</b>	<b>6187</b>
⇒ <b>2018</b>	<b>5725</b>
⇒ <b>2024</b>	<b>5222</b>
⇒ <b>2028</b>	<b>5208</b>

2015-1990

Δ **CO<sub>2</sub> EU**  
**-22%**



2028-1990

Δ **Coal EP BiH**  
**-2.2 mil. t.**  
**-30%**

2018-1990

Δ **Coal EP BiH**  
**-1.7 mil. t.**  
**-23%**



## Summary

- Long-term projections show that it is possible to make significant changes in EP BiH production portfolio resulting in lower coal use and increased RES
- Intensive investments are needed, and their scope and the dynamics depend on the own financial capacity



## Summary

- Financial indicators show the limits in the terms of financial capacity for the realization of large capital projects
  - improvements are necessary in:
    - overall productivity,
    - tariff policy and
    - corporate governance
- Any additional financial burden threatens liquidity and reduces the ability to invest



## Summary

- Coal mines status are the most important and social sensitive issue, significant financial resources are needed either for modernization or closure
- The specificities, conditions and needs of each country, particularly financial capacity and the provision of affordable and reliable energy, must be taken into account when defining the contributions and commitments of the poor countries in the context of the sustainable development program