

Joint UNECE-e8-EBRD-WEC Forum

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Electricity Market in South-East Europe

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Major regional characteristics

- energy profile prior to reforms-

- **low energy consumption per capita;**
- **sector dependence of Russian supplies & technology;**
- **el.generation based on local lignite; low EE, high pollution;**
- **heavy industry involvement, high degree of energy intensity;**
- **energy prices were not cost reflective;**
- **cross-border interconnections justified by need of hard currency**
- **devastating effect that war caused on territory of ex-Yugoslavia.**

Recent reforms & developments

- since 1990 -

- **start unbundling vertical publicly owned companies by copying the EU liberalization policy and west-European experience;**
- **reforms road-maps similar due to common features;**
- **rehabilitation of electric power infrastructure financed by foreign grants and funds mainly;**
- **preparation to re-connect with UCTE.**

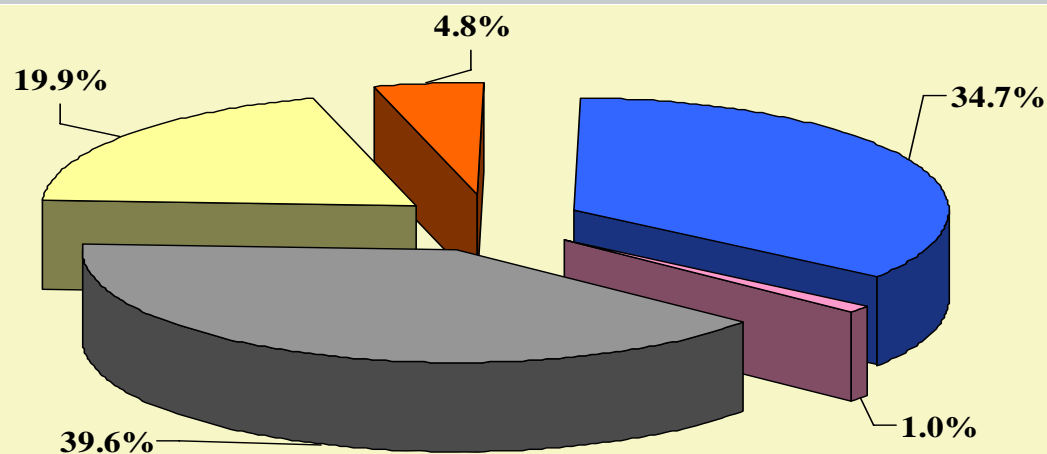
Recent reforms & developments

- since 1990 (more...) -

- **lack of finance to strategic investments in power generation, and in the full energy chain;**
- **enhanced political will, to think regionally on security of supplies resulted in launching an initiative to create regional el.market; and subsequently to connect it, to Pan-European one;**
- **Promising projects on hydrocarbons, thanks to strategic position of SEE, in particular on natural gas.**



Installed generating capacities in SEE, 2008

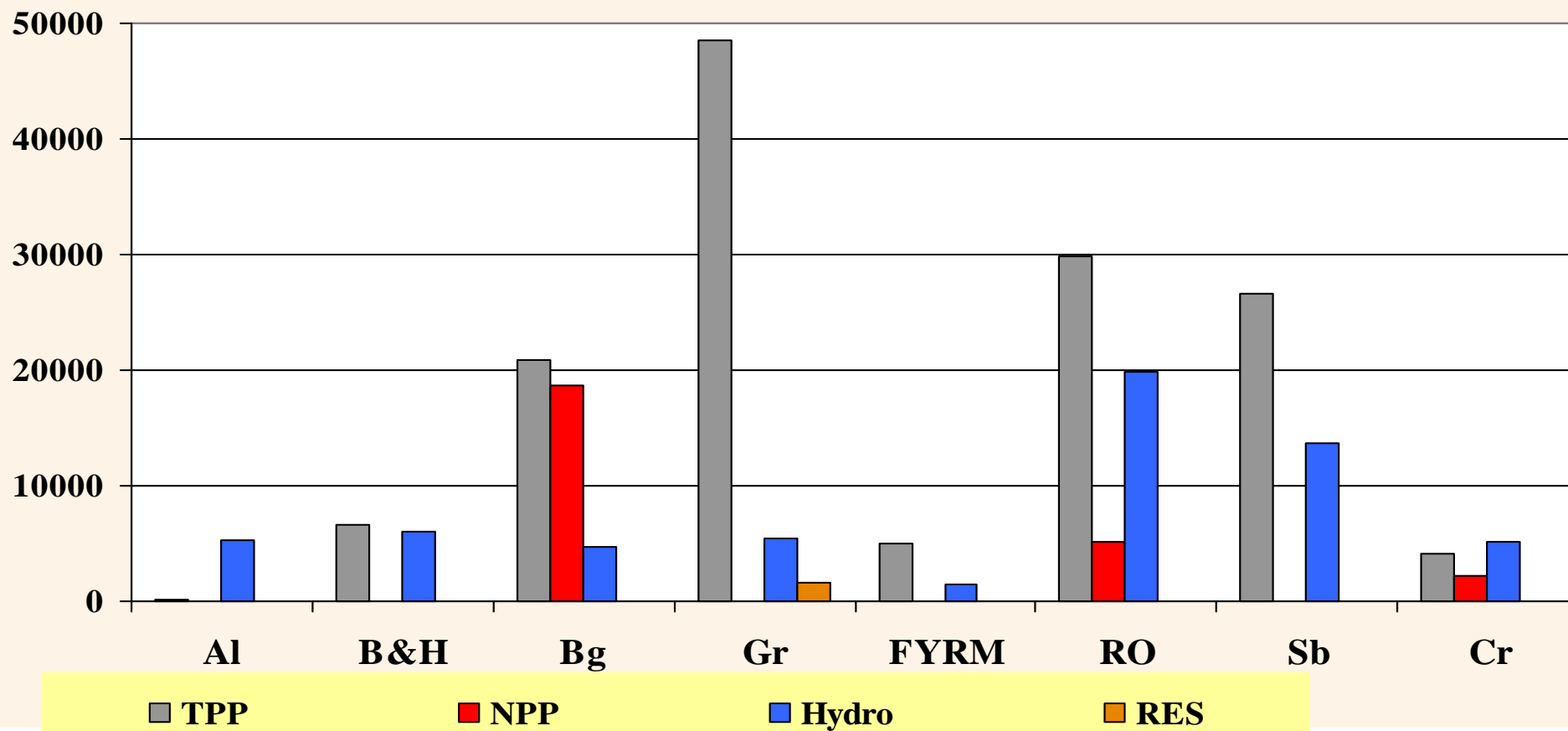


■ TPP based on coal ■ TPP based on heavy fuel & gas ■ NPP ■ Hydro ■ RES

1. TPP based on coal	– 24669 MW
2. TPP on heavy fuel & gas	– 12352 MW
3. NPP	– 3873 MW
4. Hydro	– 21594 MW
5. RES	– 602 MW
<u>Total</u>	<u>– 63090 MW</u>

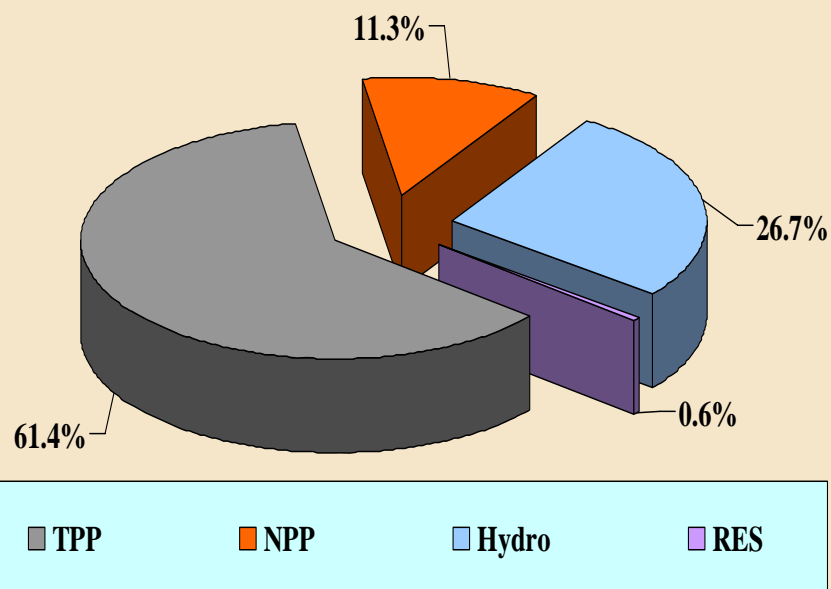


Total electricity production by country & sources, GWh

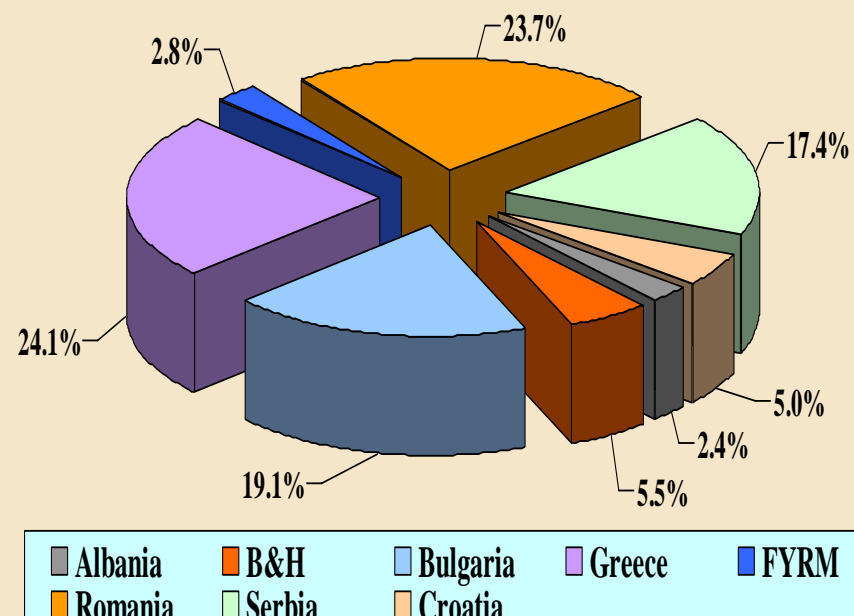




Regional Electric Power Structure, in 2008

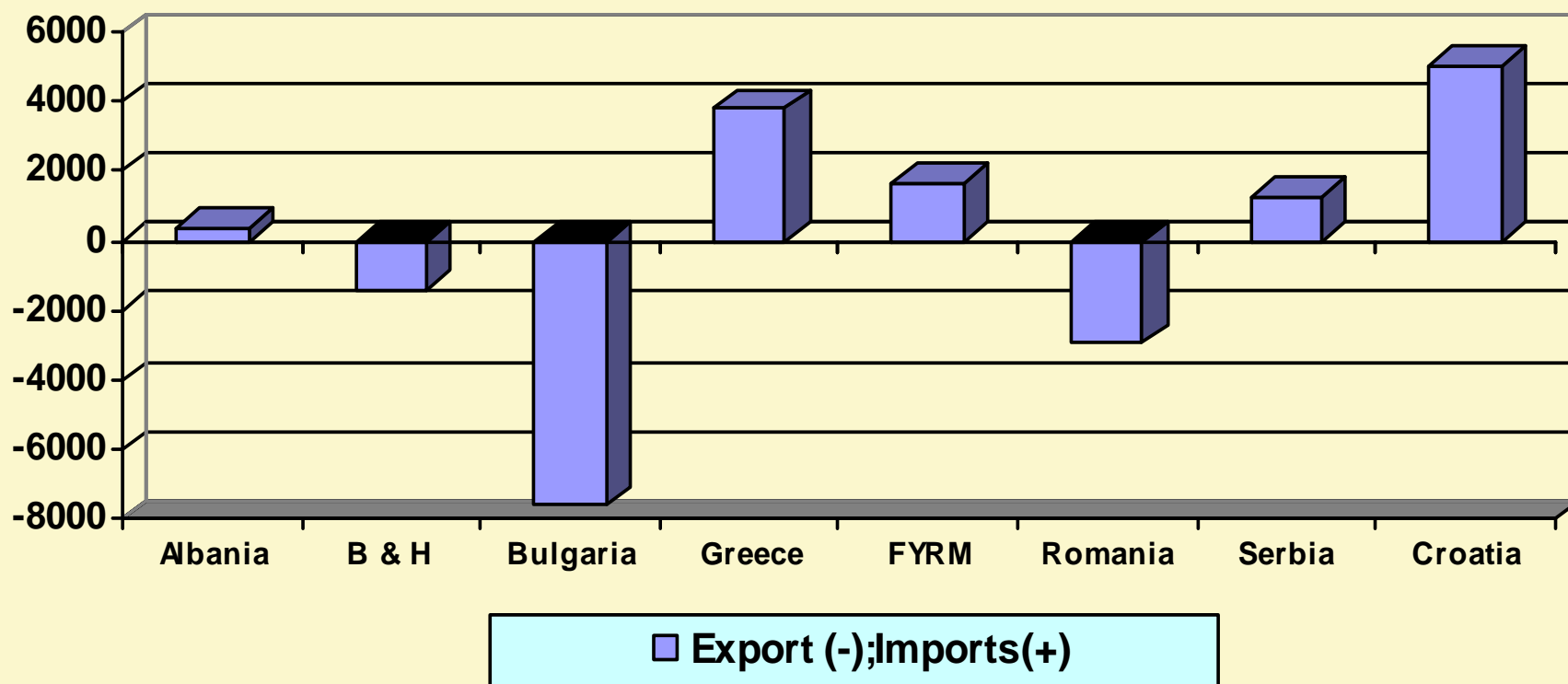


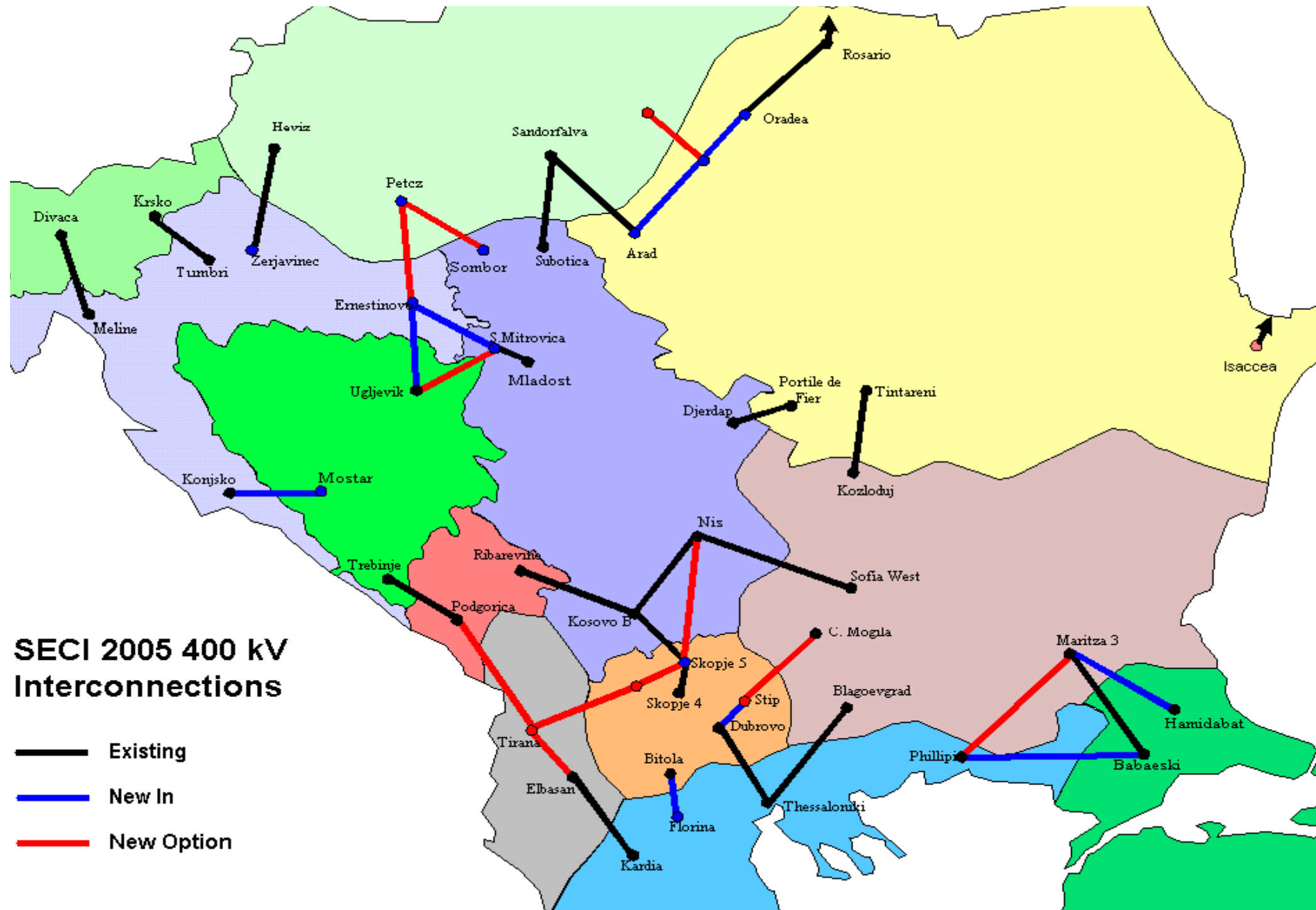
1. TPP	– 141, 718 GWh
2. NPP	– 26, 027 GWh
3. Hydro	– 61, 792 GWh
4. RES	– 1, 600 GWh
Total	– 231,137 GWh





Cross-region exchange of electricity in SEE in GWh, 2008

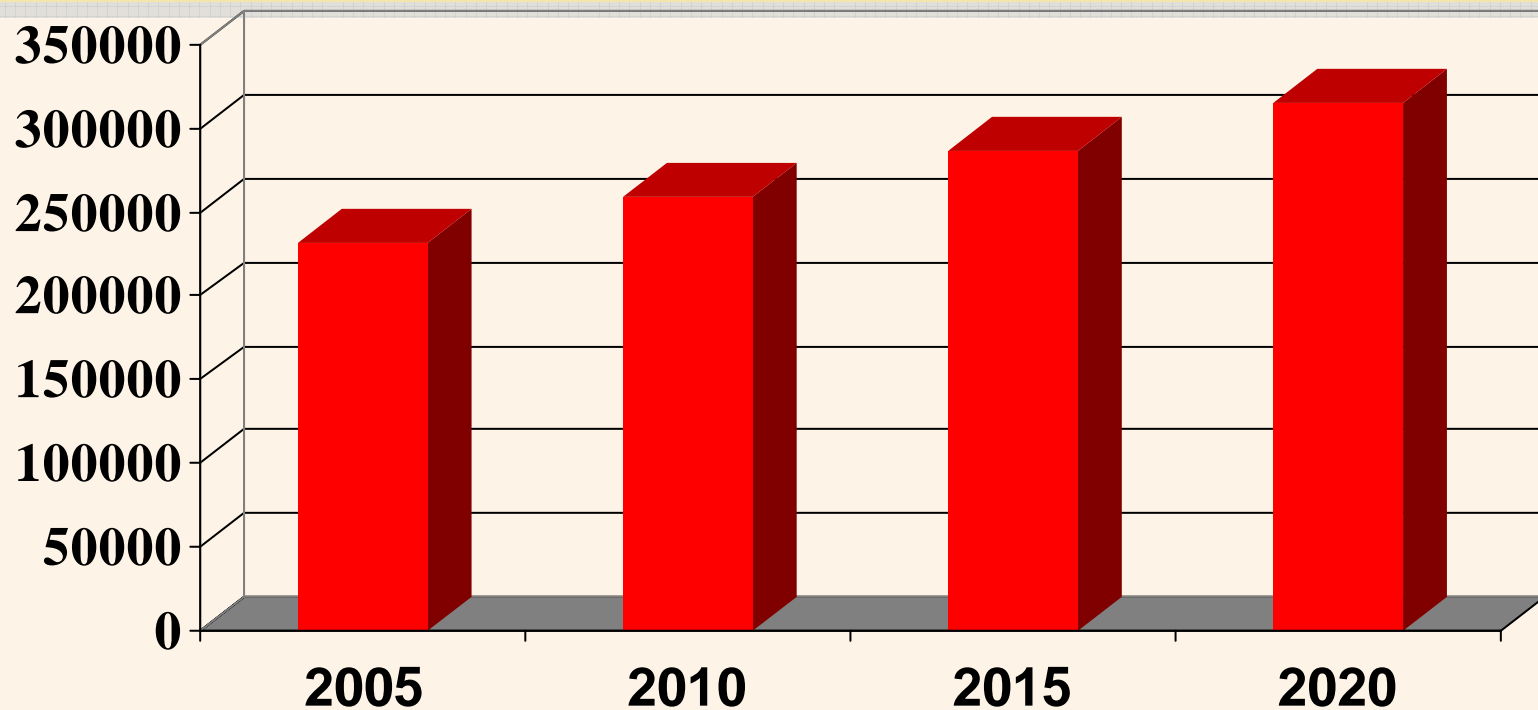




Forecast electricity demand growth in SEE, 2005 – 2020 %

Country	2006 - 2010	2011 - 2015	2016 - 2020
Albania	2.0	2.0	2.0
B & H	4.0	3.5	3.0
Bulgaria	2.0	2.0	1.5
Croatia	3.0	3.0	2.5
Greece	1.5	1.5	1
FYRM	4.0	3.0	3.0
Romania	2.5	2.5	2.5
Serbia + Montenegro	2.0	2.0	2.0
SEE Region	2.3	2.1	2.1

Prognosis of SEE- regional electricity demand growth, period 2005 – 2020, GWh



Growth of 36,4%, between 2005-2020; or by 2,4%/year;

A Few Conclusions..

- **Currently: lack of electricity in South-East Europe; and sustain reduction of electricity supplies; shortages/blackouts in Albania, Montenegro, Macedonia; this results in a..**
- **high increase of el.prices, subsidies applied when importing;**
- **earlier closure of Kozloduy 4-reactors had negative impact on regional electricity demand;**
- **Political and social tension due to shortages of electricity as prices are regulated;**
- **Absence of full unbundling in SEE region.**

A Few Conclusions (cont`)

- **internal cross-border connections relatively good, but not the external ones;**
- **by 2020, el.demand grows by 85 000 GWh or 36,4% (average of 2,4% per year). To meet the needs, new gen.capacities of 20 GW are necessary. The required investments: in order of 30 B Euro;**
- **over next 3-5 years, electricity shortages of 10 000 GWh should be covered by imports from external suppliers; from where ???; IPPs would generate a large portion;**

Some priority needs...

- **refurbishing of coal-based TPPs and enhancing further connections;urgent investments and build of new gen.capacities;**
- **enhancing efficiency of power generation as priority;**
- **diversification of energy mix (more gas, RES, nuclear);**
- **developing a regional market design and compatible market rules for the region.**

THANK YOU

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