

Rochester Institute of Technology

RIT Digital Institutional Repository

Theses

2010

Criteria for Promoting a Regional Electricity Market and Benefits to Kosovo : [presentation given February 23, 2010]

Faton Aliu

Follow this and additional works at: <https://repository.rit.edu/theses>

Recommended Citation

Aliu, Faton, "Criteria for Promoting a Regional Electricity Market and Benefits to Kosovo : [presentation given February 23, 2010]" (2010). Thesis. Rochester Institute of Technology. Accessed from

This Master's Project is brought to you for free and open access by the RIT Libraries. For more information, please contact repository@rit.edu.

AMERICAN UNIVERSITY IN KOSOVO

in partnership with

ROCHESTER INSTITUTE OF TECHNOLOGY

Center for Multidisciplinary Studies

Master of Science Degree in Professional Studies

Service Management

**CRITERIA FOR PROMOTING
A REGIONAL ELECTRICITY
MARKET AND BENEFITS TO
KOSOVO**

March 12th, 2010

Presenter: Faton ALIU, M. Sc. Candidate

Agenda



- Problem introduction and background
- Treaty-Energy Community
- Criteria for establishing electricity market
- KOSTT participation on regional mechanisms
- Regional Market Operations and Mechanisms
- Conclusion and recommendation

Introduction



- This capstone project gives a general background of electricity markets with developments in Europe and especially Southeast Europe (SEE) for meeting the criteria for promoting a more integrated regional electricity market.

- This project also particularly considers certain interconnections (existing and proposed) case studies:
 - Albania's transmission connections with Montenegro,
 - Kosova's transmission connections with Albania,
 - Italy's transmission (submarine) connections with Montenegro, Albania and Croatia.

Market liberalization in Europe

Started in 1997 - Directives 96/92/EC

EC Directive 2003/54

- Key European legislation to establish the Internal Market of Electricity
- Establish common rules for Gen, TSO, DSO

EC Regulation 1228/03

- Rules for CBT and transmission of electricity

Energy Community
Treaty

(signed in October 05)

Security of Supply

Competitiveness

Environmental Protection

Kosovo - Signatory Party – Implementation of “Acquis Communautaire “

Treaty-Energy Community



- Objectives of the treaty
 - ensuring stability and attract investments
 - security of supply of energy
 - optimized use of energy sources
 - optimized future investments

The final objective is integration of the region into the internal energy market of the European Community.

Kosovo and Treaty

- In 2002, UNMIK on behalf of Kosova signed the MoU on SEE Regional Energy Market and its revision on 2003
- Following the regional requirements, on June 2004, Kosova has developed and approved the primary legislation on energy in line with the EU Directives and Regulations
 - ▣ Law on Energy – 2004/8
 - ▣ Law on Electricity – 2004/10
 - ▣ Law on Energy Regulator – 2004/9

Criteria for establishing electricity market



1. Supply and demand conditions,
2. Trading Mechanisms,
3. Physical capabilities of transmission lines,
4. Electricity related legal and regulatory issues,

Criteria for establishing electricity market



5. Increase of generation capacities in region,
6. Electricity market prices and tariffs,
7. Third Party Access to use the network, and
8. Environmental issues and renewable energy sources.

Kosovo TSO - KOSTT



KOSTT j.s.c is the Kosova Electricity Transmission, System and Market Operator.

Appointed by the Ministry of Energy and Mining and licensed by the Energy Regulatory Office pursuant to the provisions of the primary and secondary Kosova legislation, KOSTT j.s.c became a licensed entity for the Transmission System Operation and for the Market Operation, in October 2006.

KOSTT participation on regional mechanisms



- Dispute between KOSTT and EMS
- Inter-TSO compensation mechanism (transit compensation)
- Congestion Management (capacity allocation)
- Regional Balancing Mechanism
- Wholesale regional Market
- Commercial and Legal Issues
- Effects on the Market Development

New interconnection lines



FYROM – ALBANIA INTERCONNECTION

- A 400-kV interconnection line between Manastir (MK) and Elbasan (AL) is being considered. This line is supposed to be a part of the backbone of Corridor 8, a foreseen gas, oil and energy connection between the Adriatic and the Black Sea.

New interconnection lines

MONTENEGRO – ITALY INTERCONNECTION

- A 500-kV HVDC submarine cable (thermal capacity 1 000 MW) between Tivat (ME) and Villanova (IT) is being planned. “Agreement for carrying out the preliminary project and proceeding to the implementation phase of the new undersea interconnections between transmission grids of Italy and Montenegro” was signed (end of 2008).
- Feasibility and technical studies have been completed and a new study - on the reinforcements required on the Montenegro transmission system – has been launched in 2008.

New interconnection lines



ALBANIA – MONTENEGRO INTERCONNECTION

- A 400-kV-line between Tirana (AL) and Podgorica (ME) is under construction. This interconnection line establishes a stiff connection of Albania with its neighbors and allows the safe operation of the Albanian system also under emergency conditions. The transmission line between Tirana and Podgorica will represent a valuable asset for Albania and constitute an important missing link in the regional power network

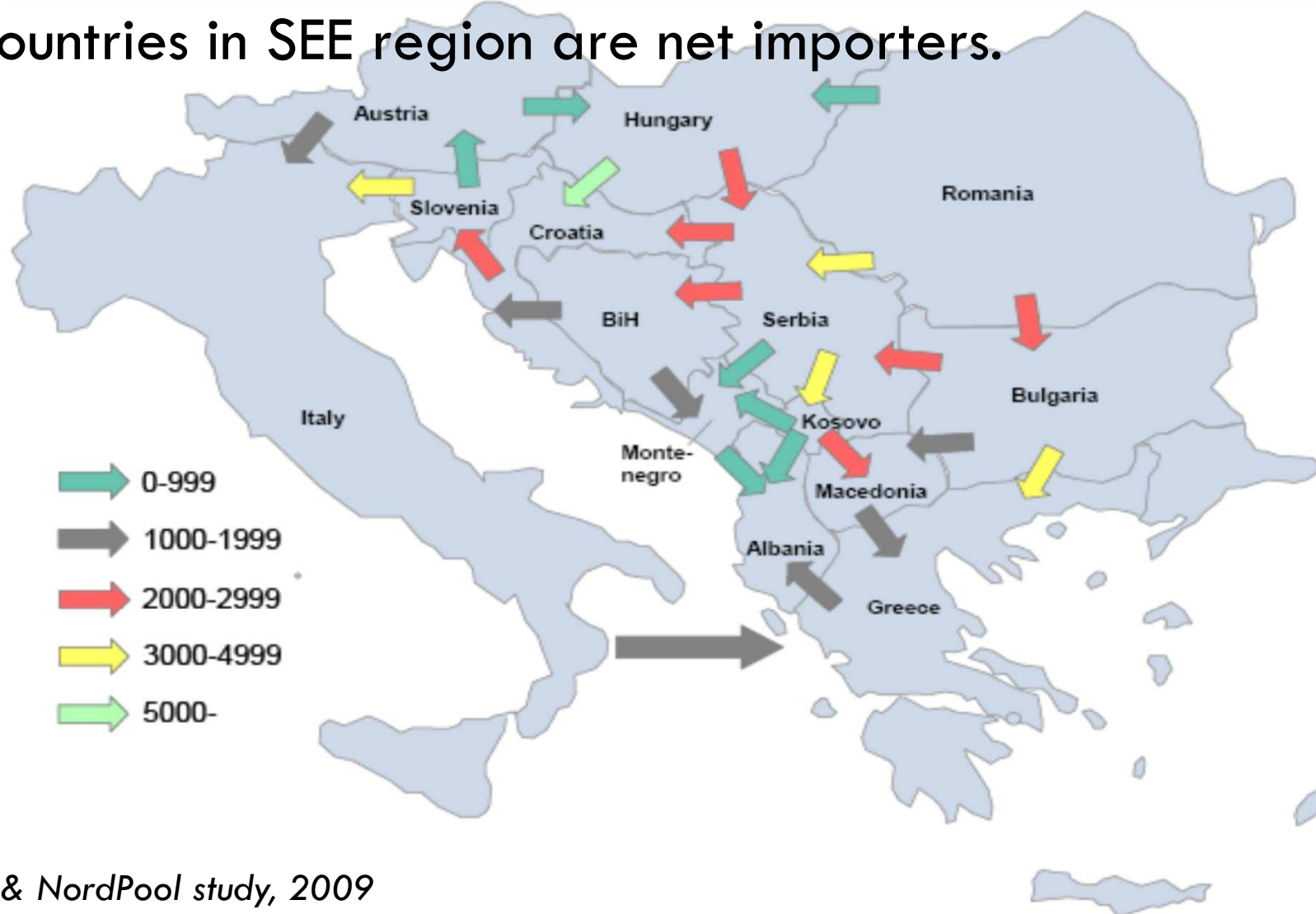
New interconnection lines

KOSOVA-ALBANIA

- **Construction of the OHL 400 kV line from the 400/220/110 kV “Tirana 2” (Albania) substation to “Kosova B” (Kosovë) substation:** Construction of the line expected to start in 2010 and end 2012. The German Government committed funds during intergovernmental negotiations with Kosova in September 2008 and with Albania in October 2008 within
- The scope of Financial Cooperation; KfW is currently engaged in financing negotiations to provide Development Loans to Kosova and Albania; the construction expected to start in 2009 and end in 2012.

Current electricity trading in SEE

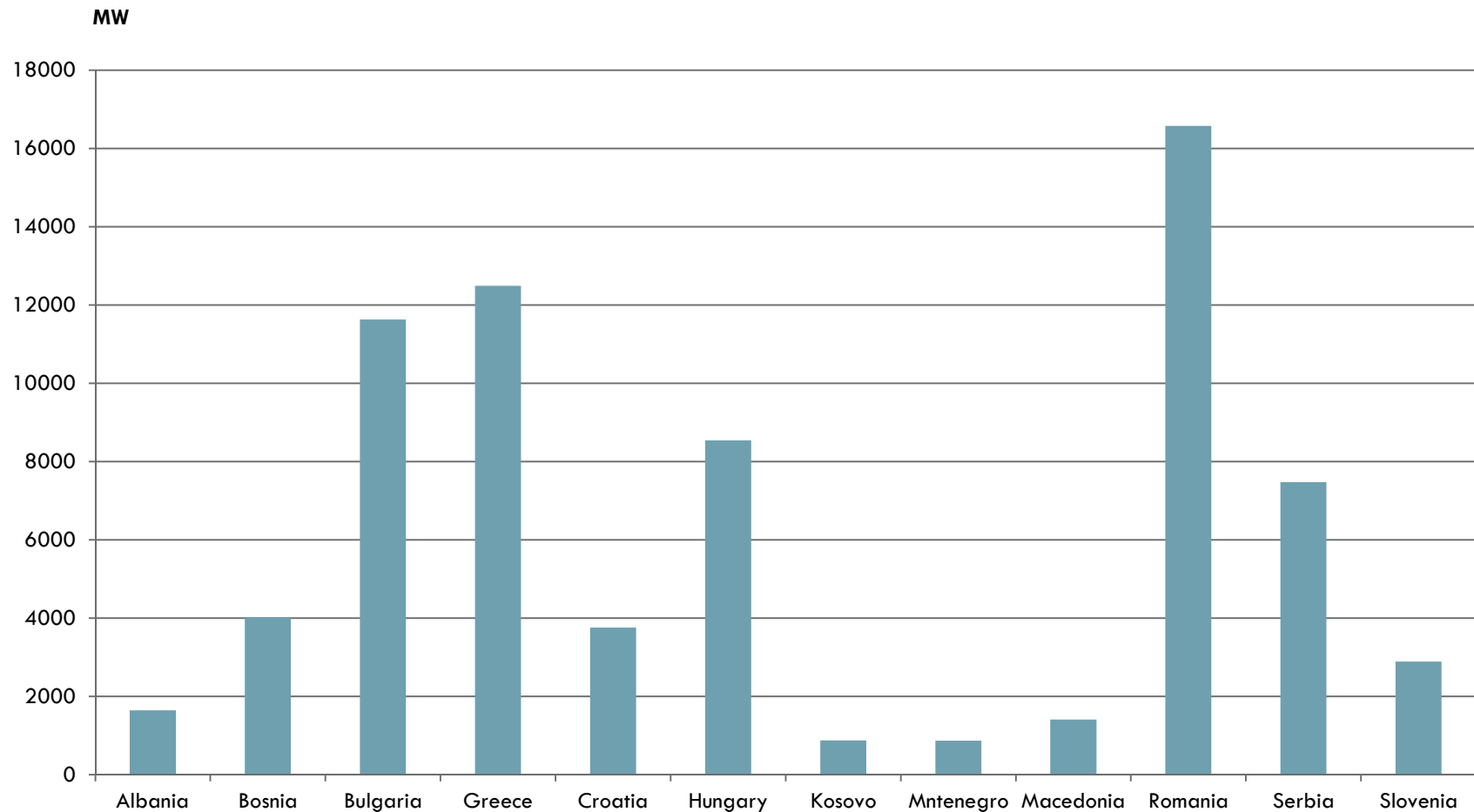
- Most countries in SEE region are net importers.



Source: Poyry & NordPool study, 2009

Current electricity trading in SEE

Net generation capacity in 2008

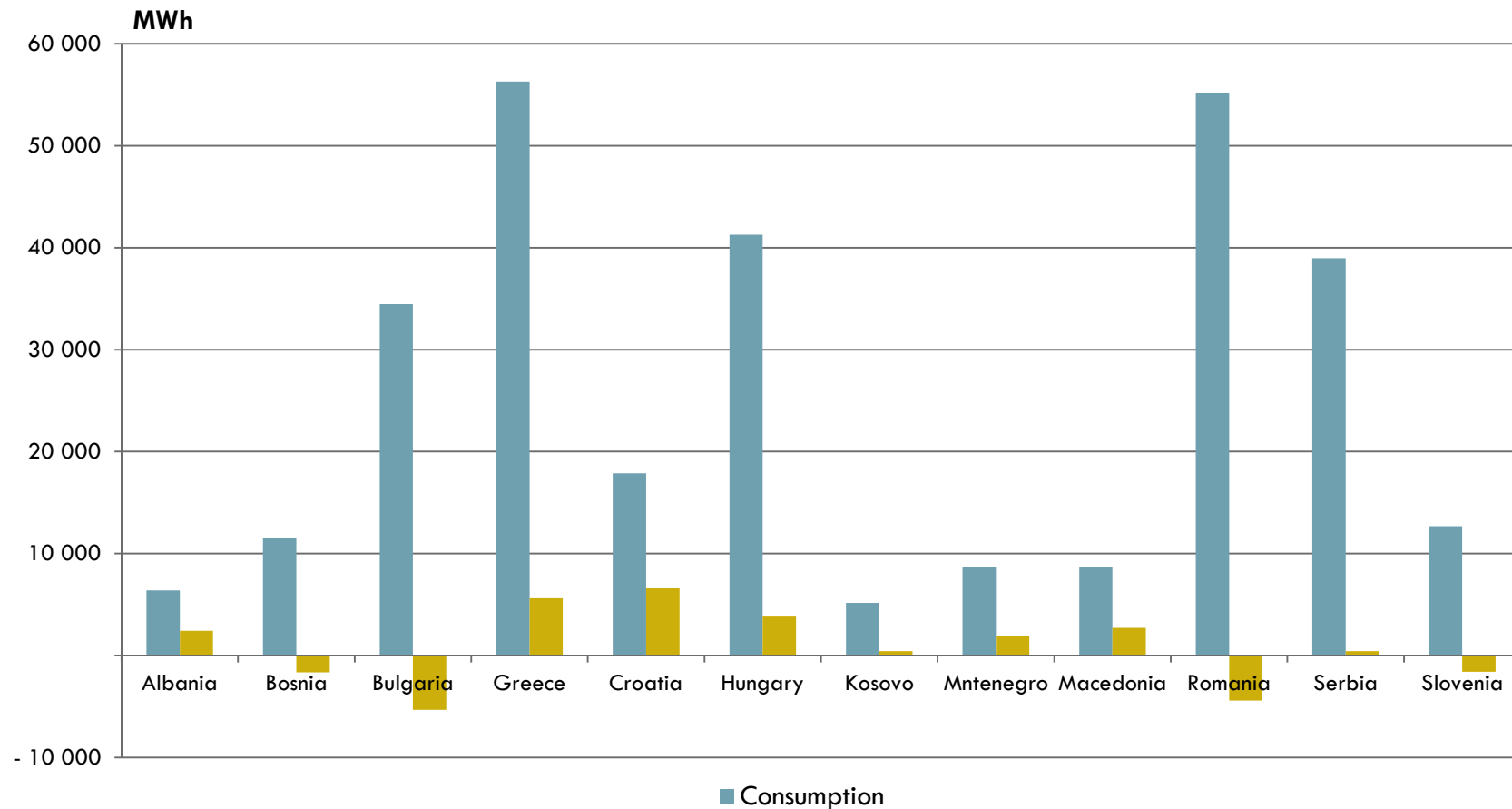


■ Generation Capacity in 2008

Source: *ENTSO-E (UCTE Memo 2008) and KOSTT*

Current electricity trading in SEE

Consumption and net import (+) / net export (-) in 2008



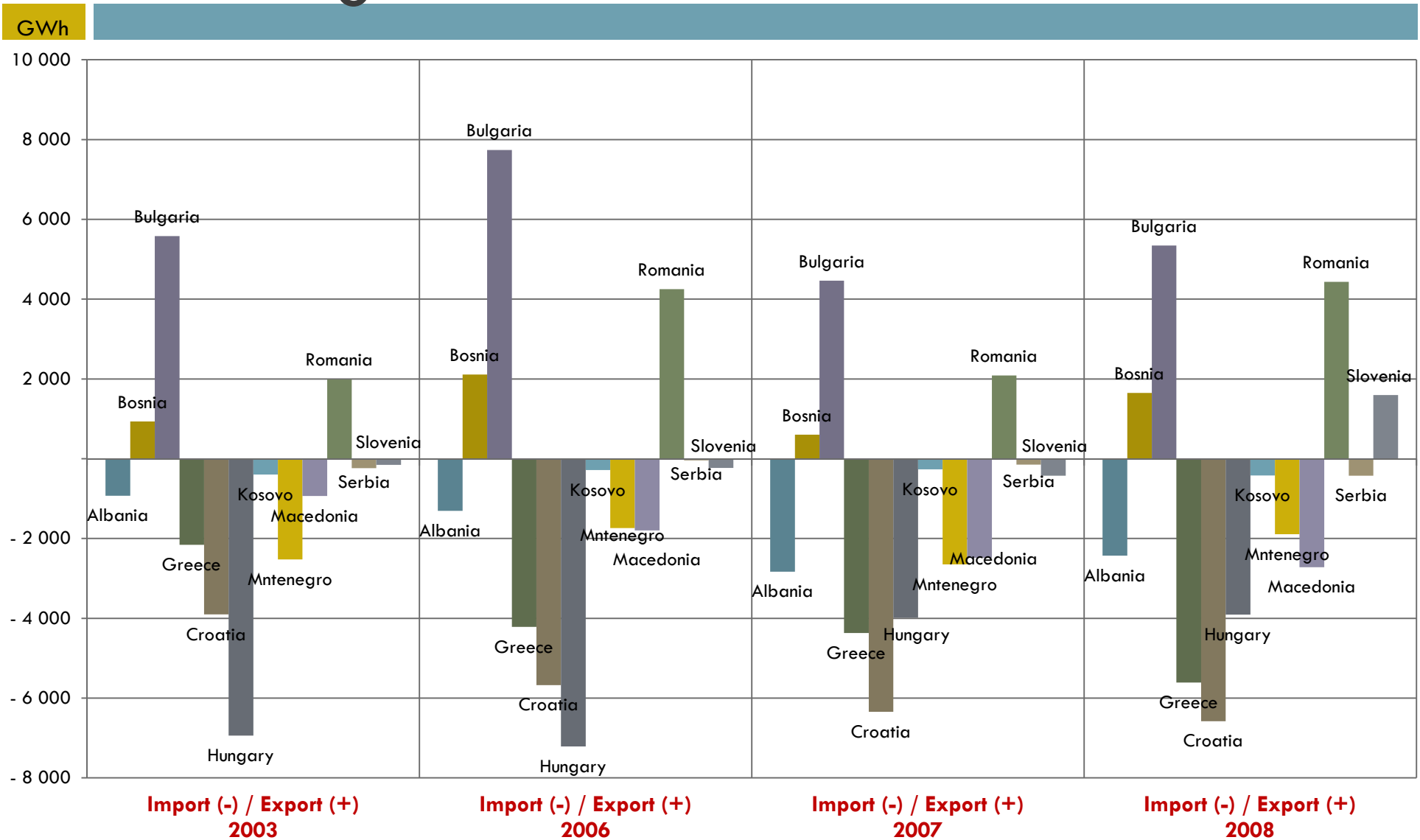
Source: ENTSO-E (UCTE Statistical Yearbook) and KOSTT

Historic energy exchange in SEE

South East Europe	Import/Export 2003	Import/Export 2006	Import/Export 2007	Import/Export 2008	Consumption 2008
<i>Countries</i>	<i>GWh</i>				
Albania	- 926	- 1 305	- 2 830	- 2 431	6 380
Bosnia	933	2 108	601	1 650	11 575
Bulgaria	5 580	7 737	4 463	5 344	34 453
Greece	- 2 156	- 4 215	- 4 366	- 5 611	56 310
Croatia	- 3 902	- 5 672	- 6 343	- 6 578	17 861
Hungary	- 6 937	- 7 214	- 3 984	- 3 905	41 284
Kosovo	- 397	- 284	- 266	- 418	5 156
Montenegro	- 2 523	- 1 735	- 2 650	- 1 894	8 643
Macedonia	- 935	- 1 796	- 2 483	- 2 717	8 643
Romania	1 989	4 249	2 086	4 433	55 217
Serbia	- 233	- 39	- 147	- 425	38 982
Slovenia	- 151	- 229	- 426	1 594	12 686

Note: In 2003, net export of Serbia, Montenegro and Kosovo was aggregated as a single block – the sharing is done proportionally based on the values of 2006, 2007 and 2008. Net import is presented as negative (-), net export as positive (+).

Graphical presentation of SEE exchanges



Actual SEE Exchanges: present and projected

South East Europe	Import/Export 2019		
<i>Scenarios</i> →	<i>Low Growth</i>	<i>Reference</i>	<i>High Growth</i>
↓ Countries	GWh		
Albania	- 2 456	- 3 070	- 3 684
Kosovo	5 272	4 394	3 515
Montenegro	- 2 025	- 2 531	- 3 038
Macedonia	- 3 287	- 4 109	- 4 930
Serbia	1 395	1 744	2 093

Conclusion



Three most important criteria:

1. Supply and demand conditions,
 2. Trading Mechanisms,
 3. Physical capabilities of transmission lines.
- From 15 planned projects, only one to be delayed
 - About 1000 MW of new generation capacity are foreseen to be built in Kosovo until 2019
 - Albania foresees new capacity of 132 MW until 2019
 - KOSTT (Kosova) disputes with EMS (Serbia)

Recommendation



- Investment in generation capacities in region
- Investments in transmission lines
- Harmonization of legal framework
- Effective monitoring system
- Continue efforts to develop the south-east European electricity market.

Recommendation



- KOSTT needs to continue with its efforts for integration into European and regional mechanisms which provide free access to the network for market participants.
- It is highly recommendable for the Government of Kosovo to further continue with a project “Kosova e Re” and ensure its success.

Recommendation



- The Kosovo government needs to enhance efforts to continue the privatization of energy enterprises, and ensure that state involvement in them does not form a barrier for new entrants.
- The Kosovo government needs to continue efforts to reduce the environmental impact of lignite mining.

References



- Fadil Ismajli, KOSTT -Challenges and opportunities of electricity industry-Kosovo Case, June 2007
- Ministry of Economy, Trade and Energy of Albania, Power Transmission Interconnection Lines, September 2007
- Facilitating East-West Electricity Trading Corridors:Trans-Adriatic Interconnections, Gabriele Manduzio, SETSO Vice Convenor, TERNA S.p.A, November 11-12, 2009
- Treaty establishing the Energy Community, October 2005,
http://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/Treaty

References

- Directive 2003/54/EC, June 2003, http://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/EU_Legislation#THEACQUISONELECTRICITY
- Regulation 1228/2003/EC, June 2003, http://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/EU_Legislation#THEACQUISONELECTRICITY
- Third legislative Package: EC Directive 2009/72 - repealing Directive 2003/54; EC Regulation 713 2009; EC Regulation 714 2009 - repealing Regulation 1228/2003, August 2009, http://ec.europa.eu/energy/gas_electricity/third_legislative_package_en.htm

References

- Law on Energy – 2004/8, <http://www.assembly-kosova.org/?krye=laws&ligjid=105&lang=en>
- Law on Electricity – 2004/10, <http://www.assembly-kosova.org/?krye=laws&ligjid=107&lang=en>
- Law on Energy Regulator – 2004/9, <http://www.assembly-kosova.org/?krye=laws&ligjid=106&lang=en>

Helpful courses



- **Context and Trends**
interdisciplinary thinking, research techniques...
- **Breakthrough Thinking, Creativity & Innovation**
problem solving, change mngt., decision making...
- **Strategic Process of Service Firms**
org. structures, procedures, policies and growth strategies...
- **Advanced Project Management**
best practices of PM, proj. portfolio mngt., multi national cultures...

Acknowledgments



- My Family
- Mr. Arben KLLOKOQI
- Mr. Fadil ISMAJLI
- Professor Brian Bowen
- I would like to thank all people who have helped and inspired me during my master study at AUK/RIT.

FINAL REPORT

Brian H. Bowen, PhD

Director for Graduate Programs & Research

RIT-AUK Center for Energy & Natural Resources

American University in Kosovo

Germia Park, Prishtina 10,000

bbowen@aukonline.org

THANK YOU FOR YOUR ATTENTION



Questions or comments?