

Future Energy Challenges in SEE

Development of the Energy Infrastructure

Energy Community Secretariat
www.energy-community.org

5th Vienna Economic Forum

10th – 11th November 2008
Vienna, Austria

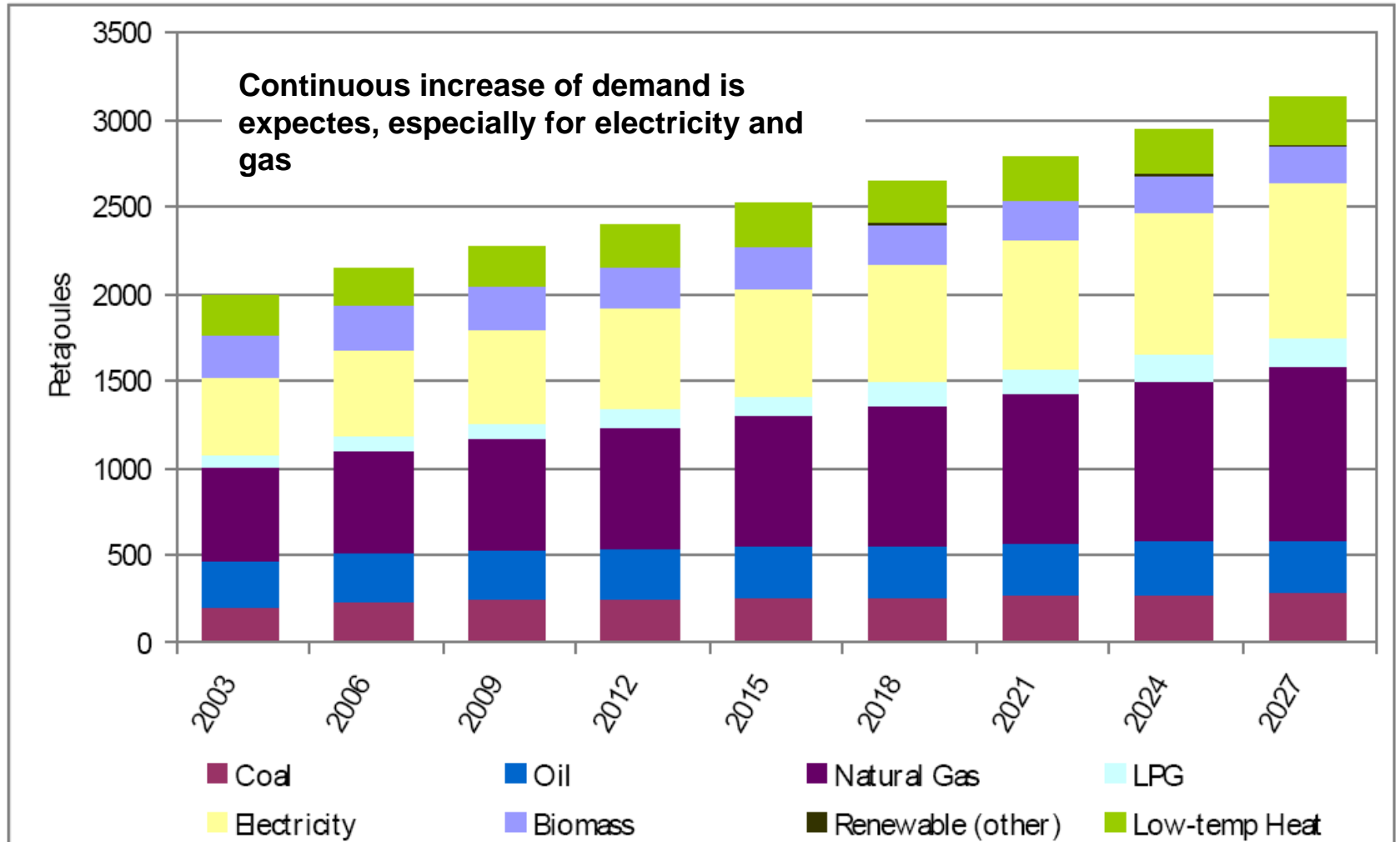
Scope

- WHICH ARE THE **MAIN CHALLENGES** FOR FUTURE SECURITY OF ENERGY SUPPLY IN THE SEE REGION
 - FUTURE ENERGY DEMAND
 - FUTURE ENERGY SUPPLY OPTIONS

- WHAT KIND OF **PRIORITY STEPS** ARE NEEDED TO MEET FUTURE DEMAND
 - NEW SOURCES OF ENERGY
 - DEVELOPMENT OF THE NETWORK INFRASTRUCTURE
 - DEVELOPMENT OF THE ENERGY MARKETS

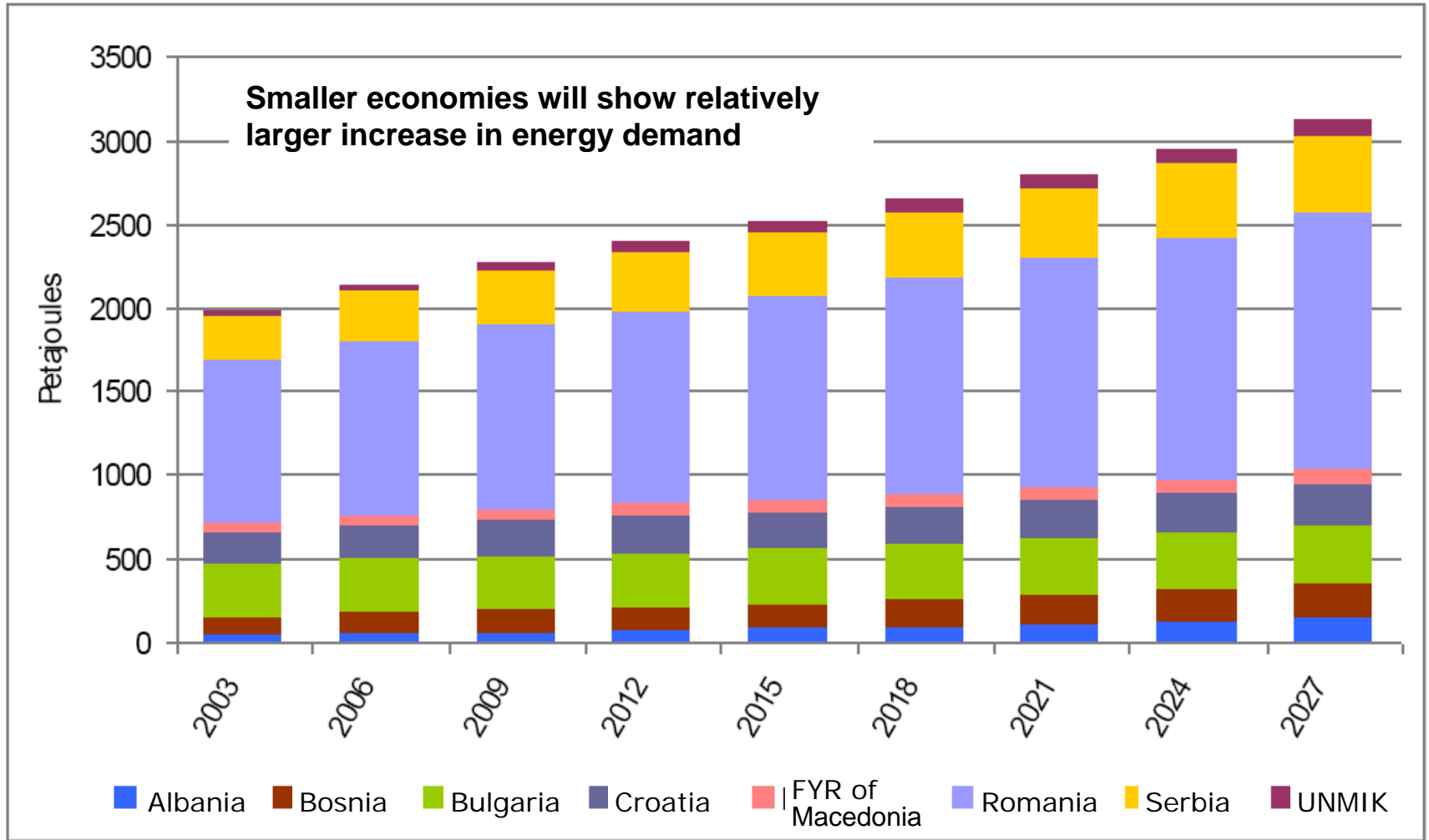
ENERGY DEMAND

SEE future energy demand *by type*



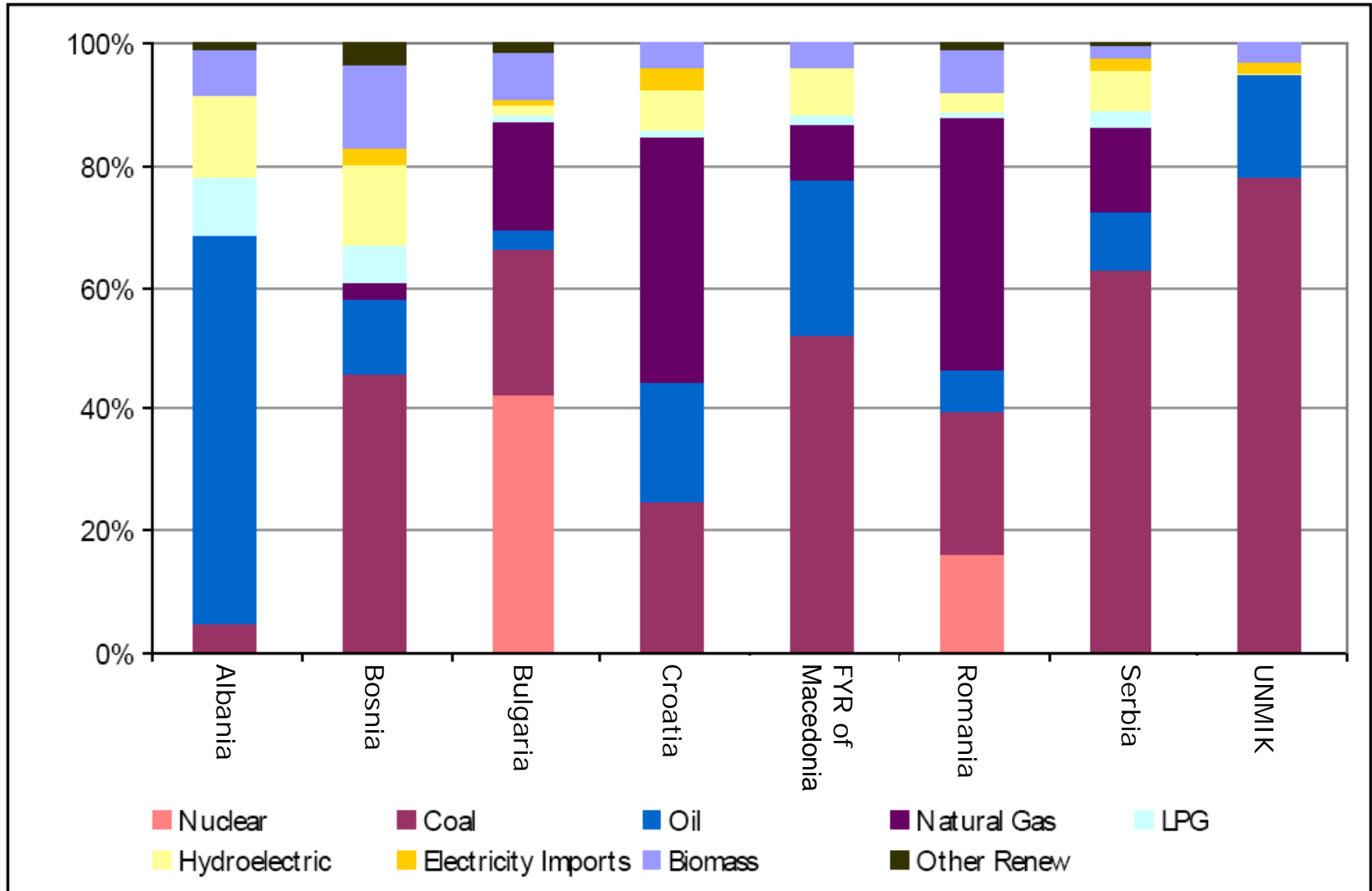
ENERGY DEMAND

SEE future energy demand *by country*



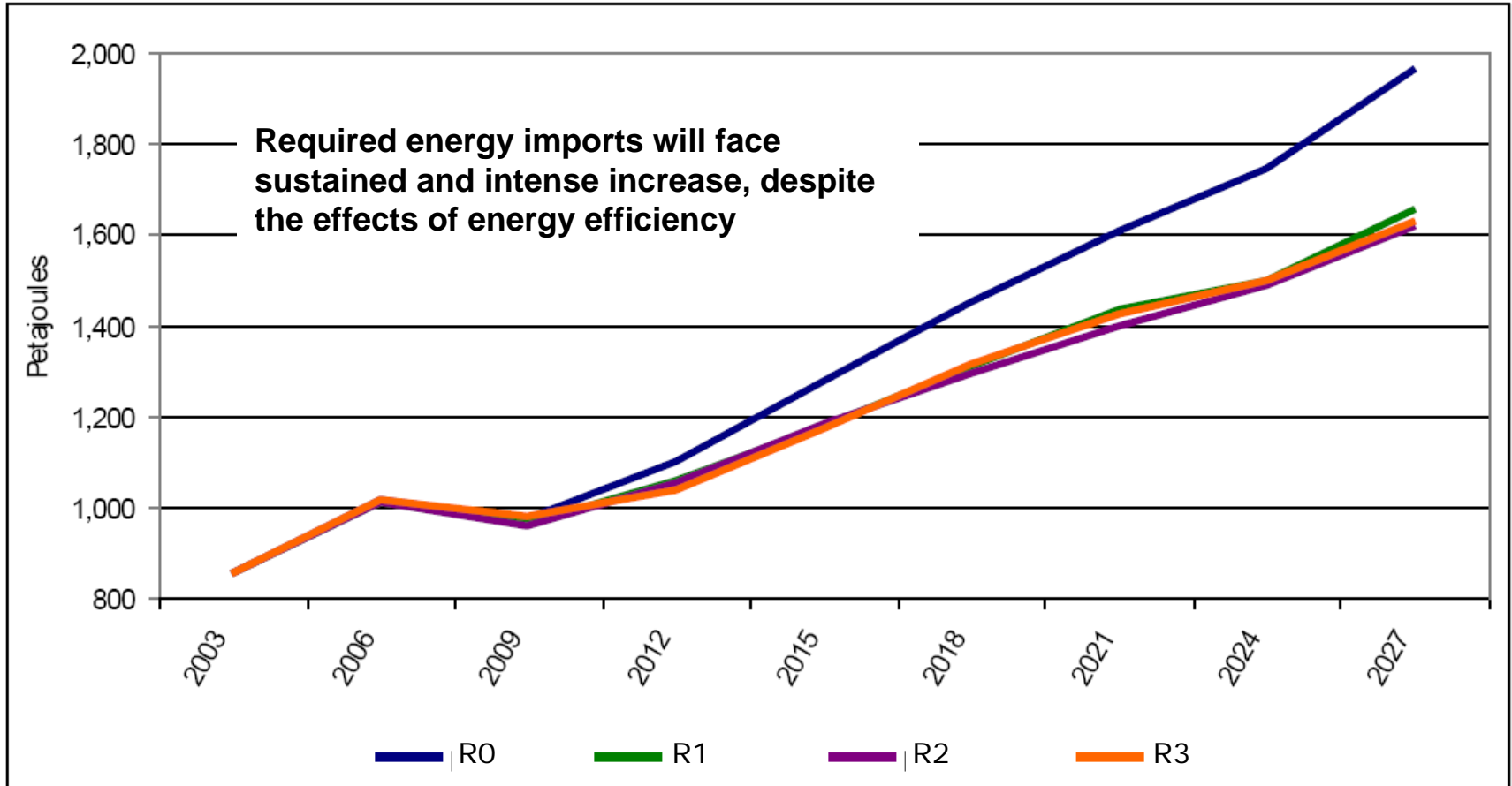
ENERGY DEMAND

SEE current composition of energy supply



ENERGY DEMAND

SEE forecast of required energy imports



R0 – Base Scenario

R1 – including promotion of energy efficiency

R2 – including 10% reduction of electricity consumption

R3 – including improvement of energy intensity

ENERGY DEMAND

SEE main regional CHALLENGES

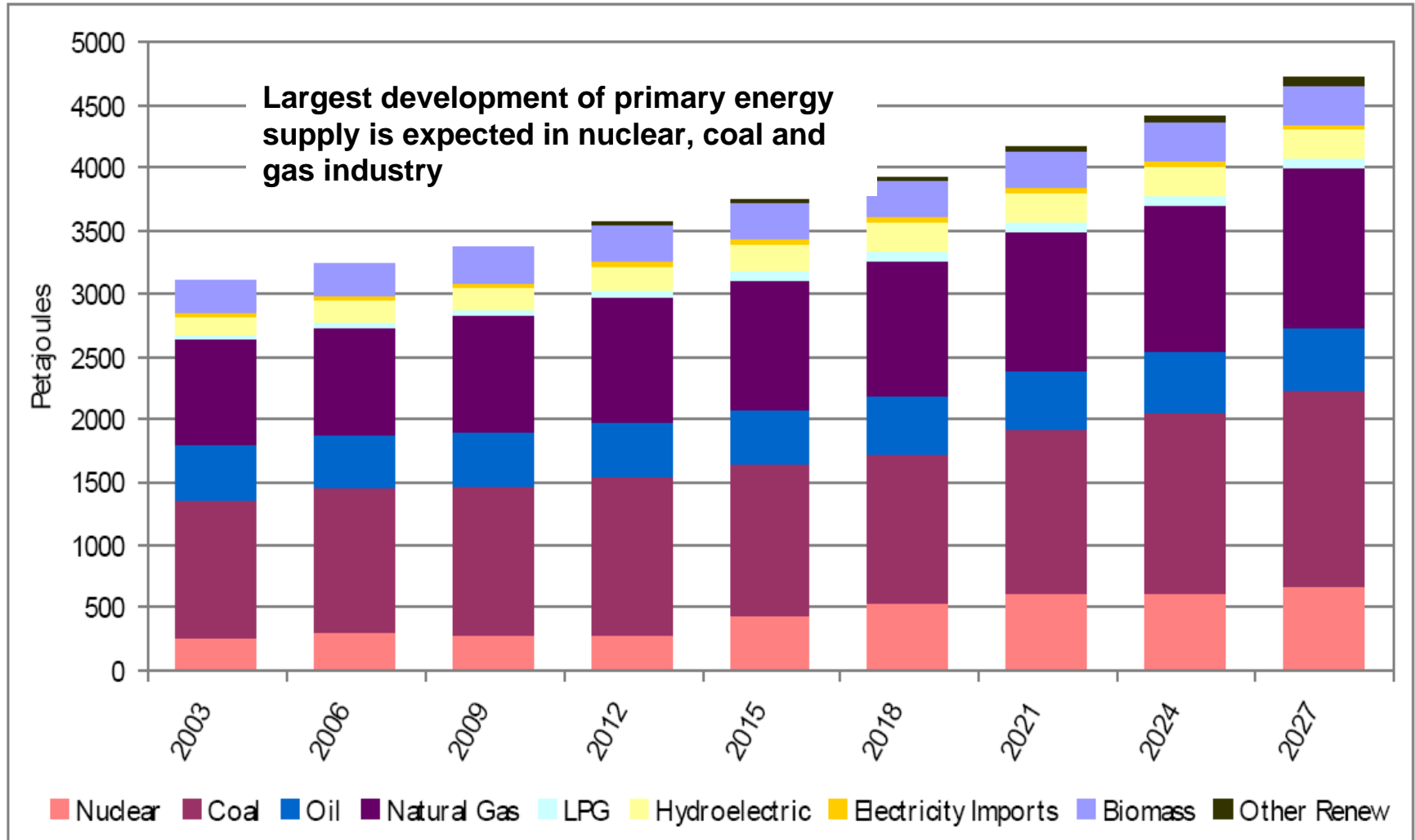
- **Increase of energy demand by over 50% in the next 20 years**
- **Diversity in primary energy supply**
- **Increase of energy import by over 100% in the next 20 years**

RESPONSE:

- **Local energy sources**
- **Energy transportation infrastructure**
- **Energy markets**
- **Additional concerns for sustainable development**
 - **Environmental aspects**
 - **Social aspects**

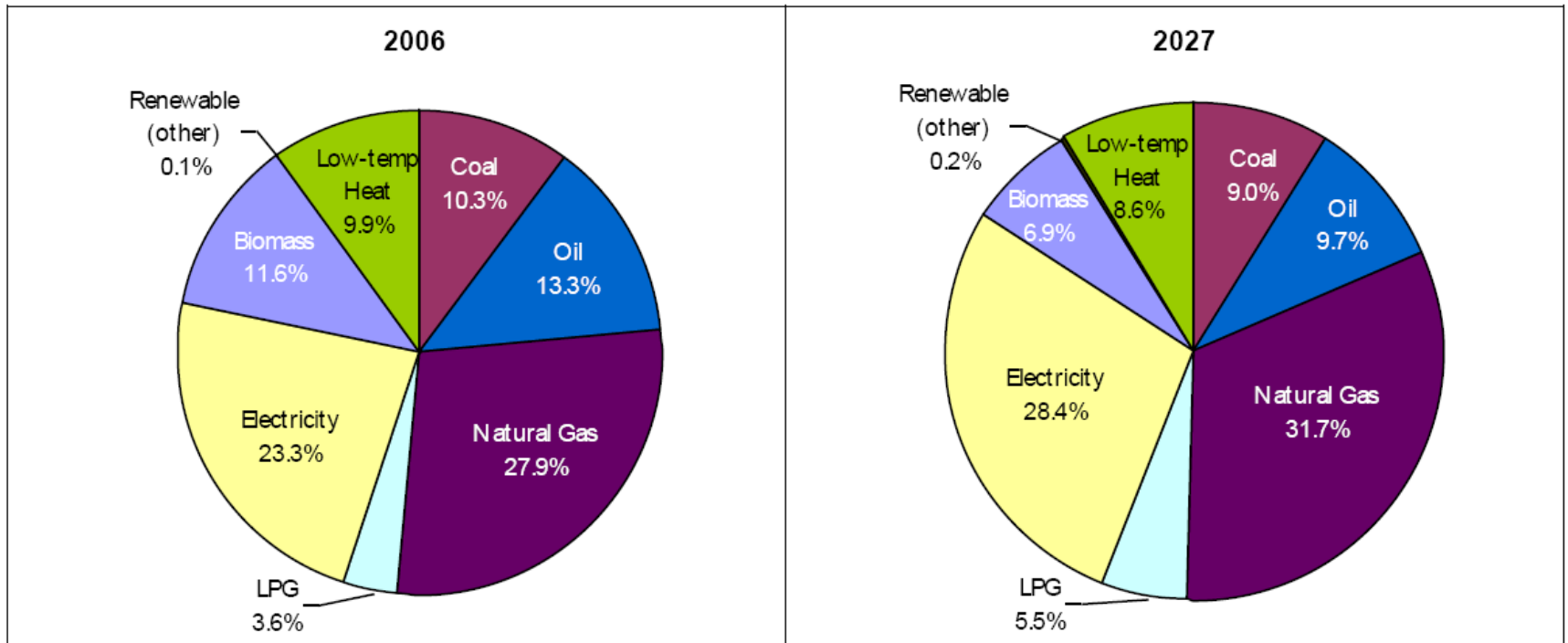
ENERGY SUPPLY

SEE regional primary energy supply *by fuel*



ENERGY SUPPLY

SEE regional final energy consumption *by fuel*

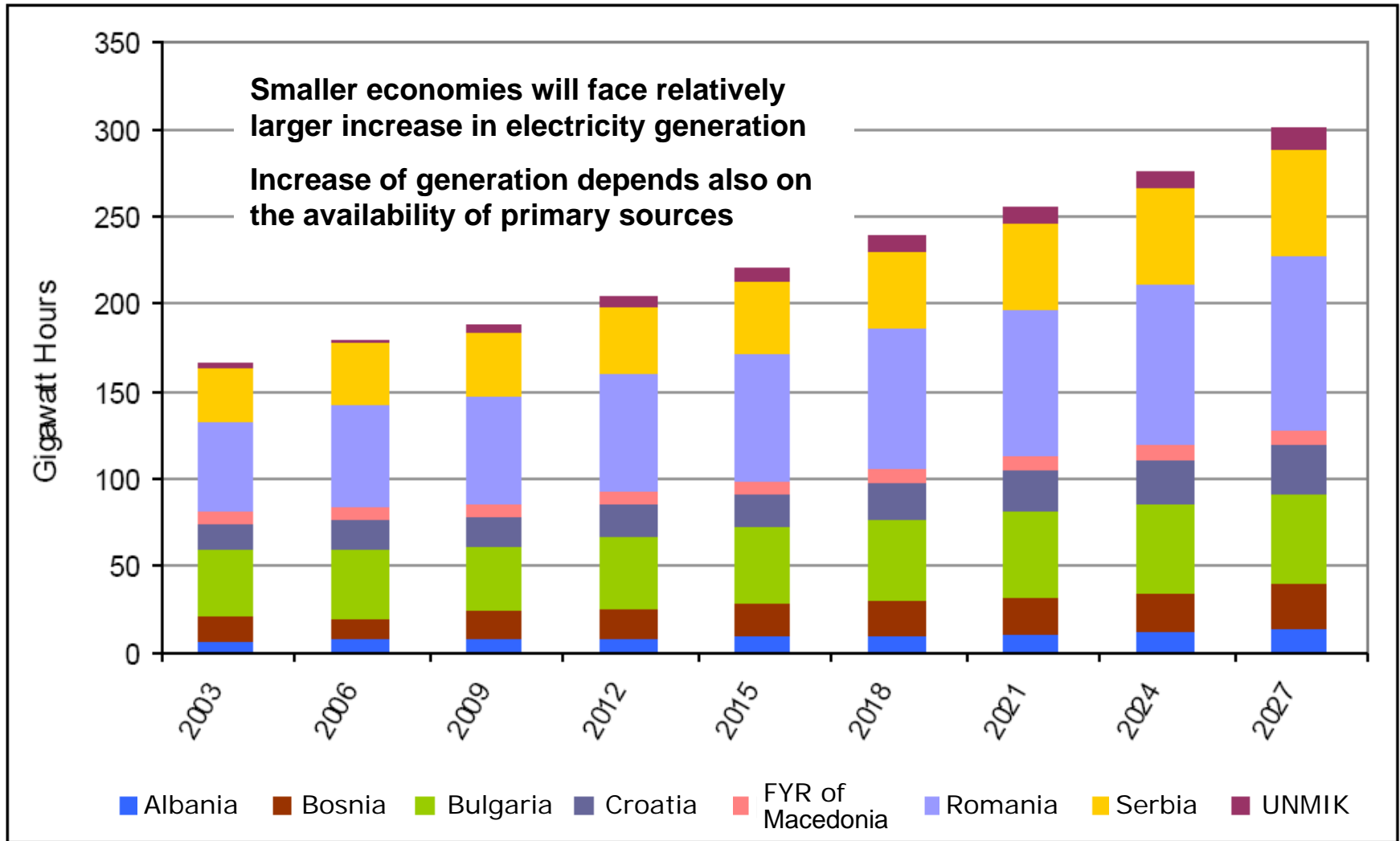


Largest increase in consumption is expected in electricity and gas area

- **Local energy sources - focuss on development of electricity generation (coal, nuclear, gas, hydro)**
- **Energy transportation infrastructure development focussed on electricity and gas networks**
- **Focus on development of electricity and gas markets**

ELECTRICITY GENERATION

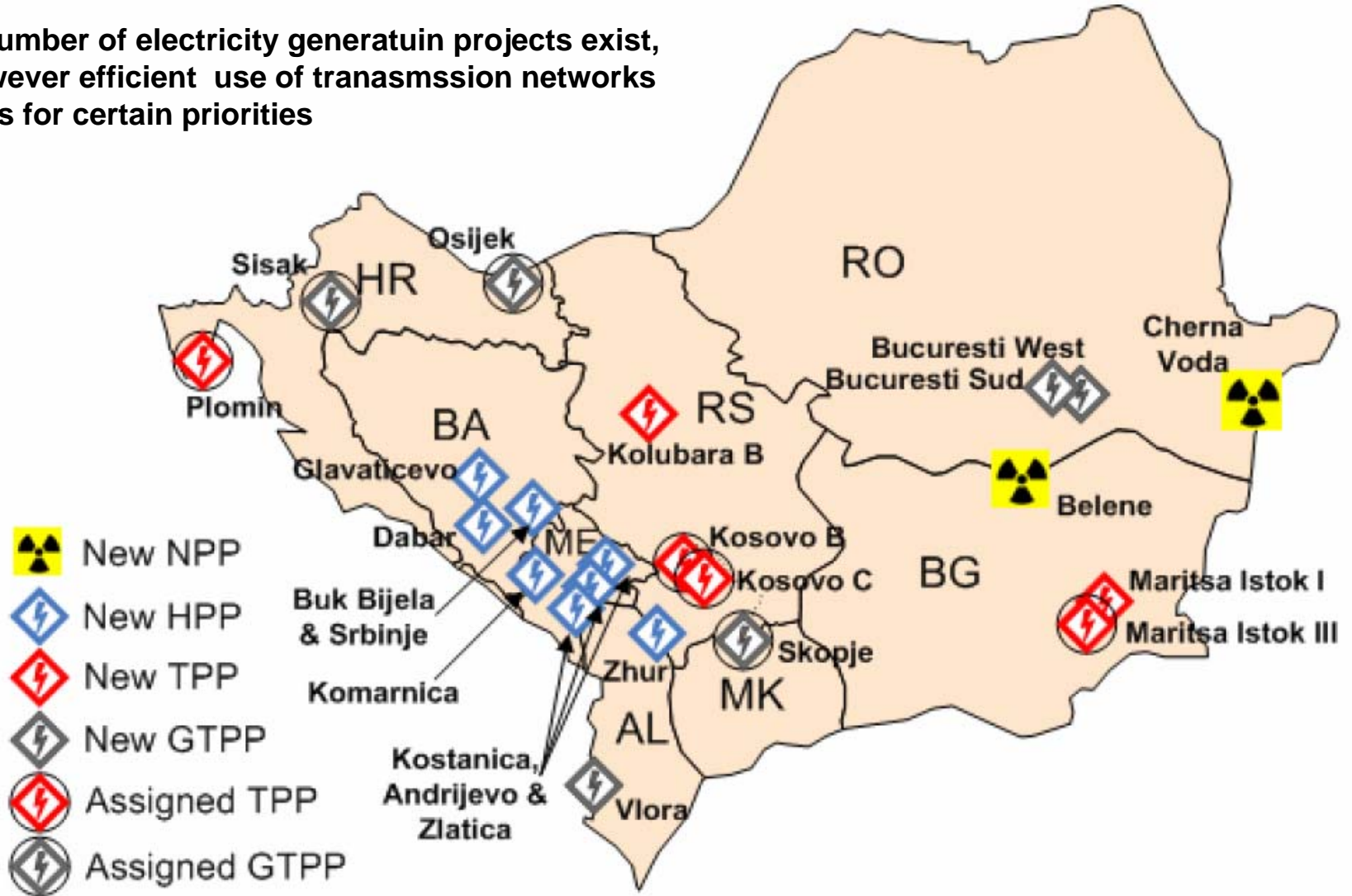
SEE electricity generation increase in the region



ELECTRICITY GENERATION

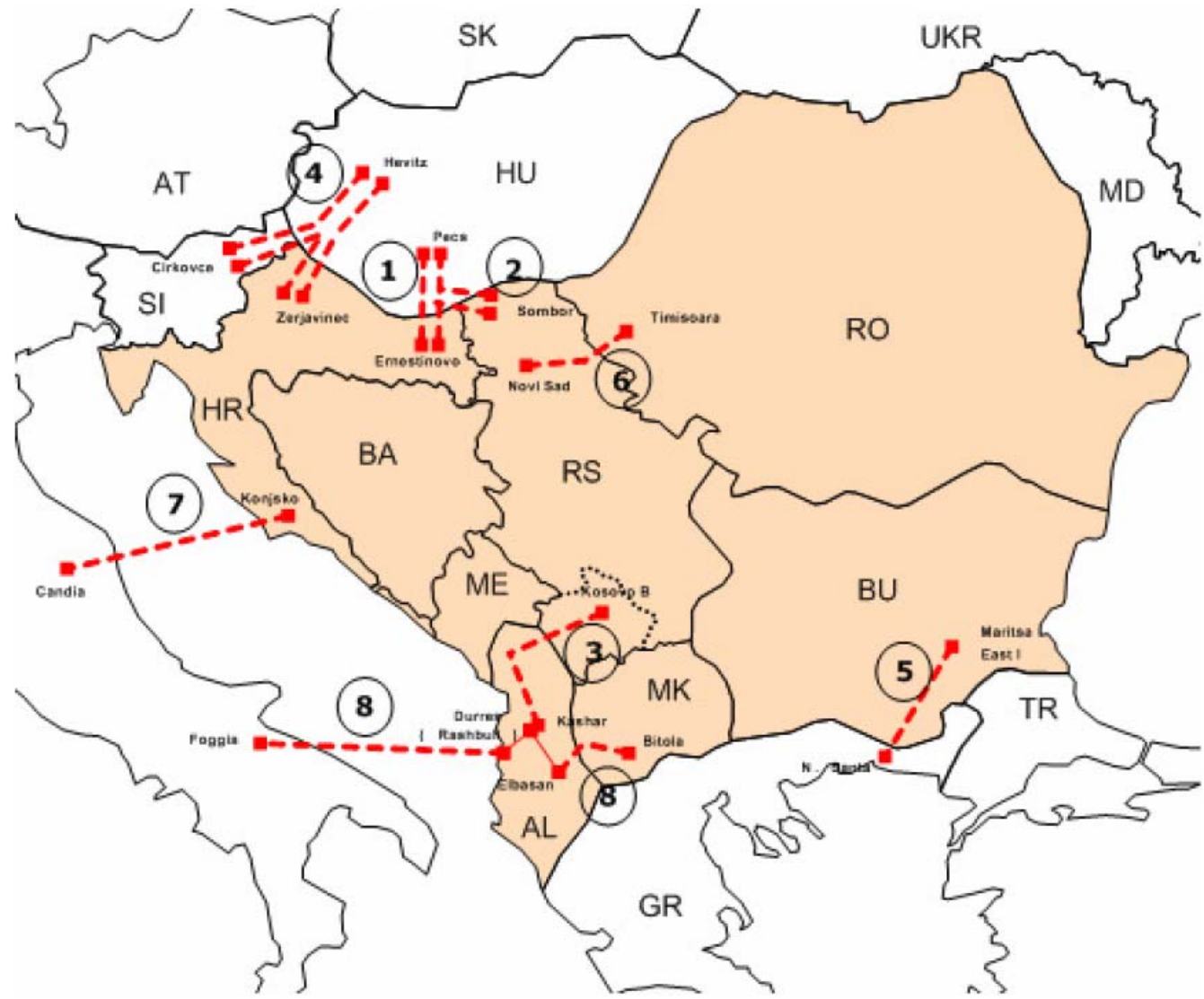
SEE region – new electricity generation

A number of electricity generatuin projects exist, however efficient use of transmssion networks calls for certain priorities



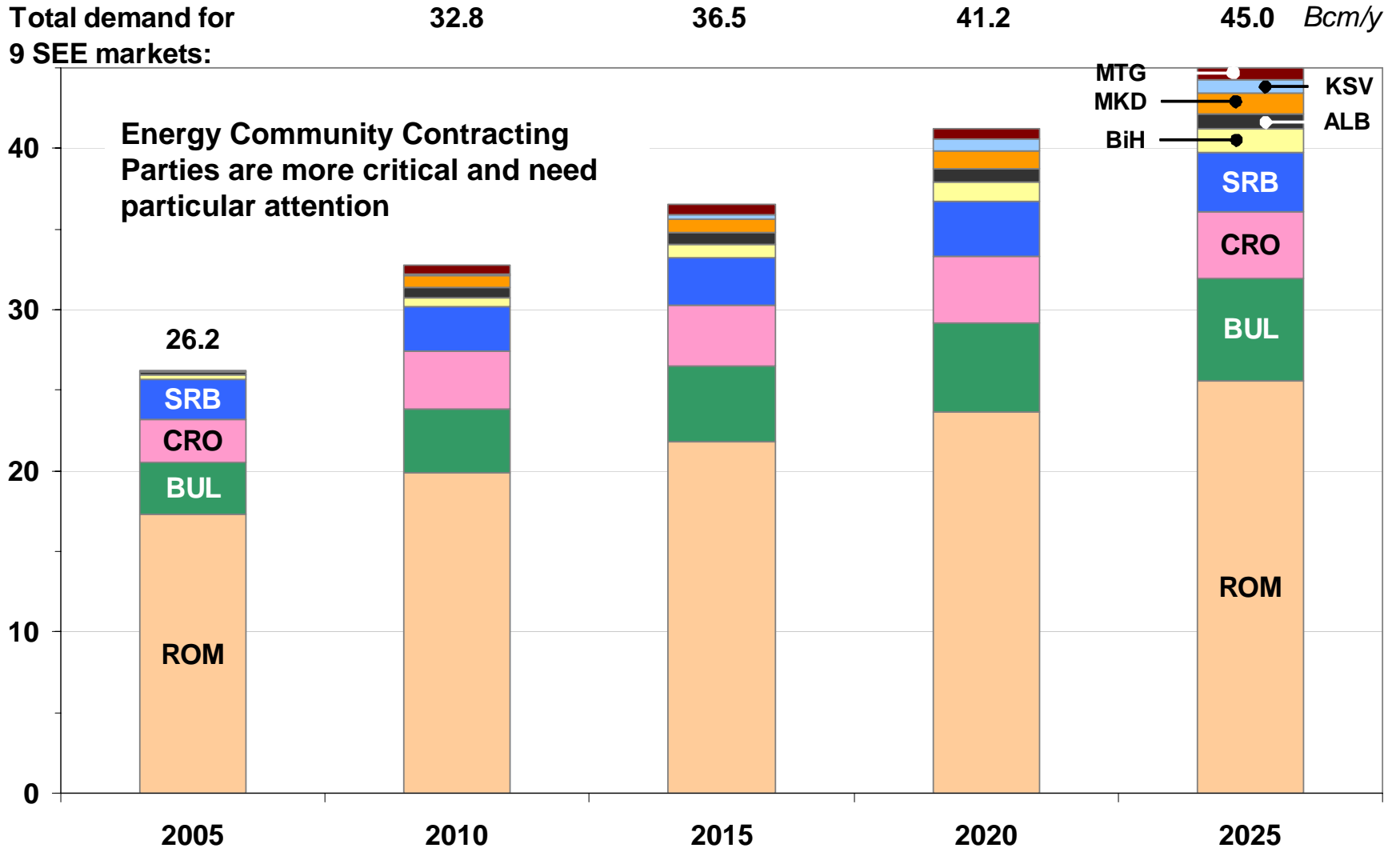
ELECTRICITY TRANSMISSION

SEE region – ranked new interconnection lines



GAS CONSUMPTION

SEE region – projected gas demand



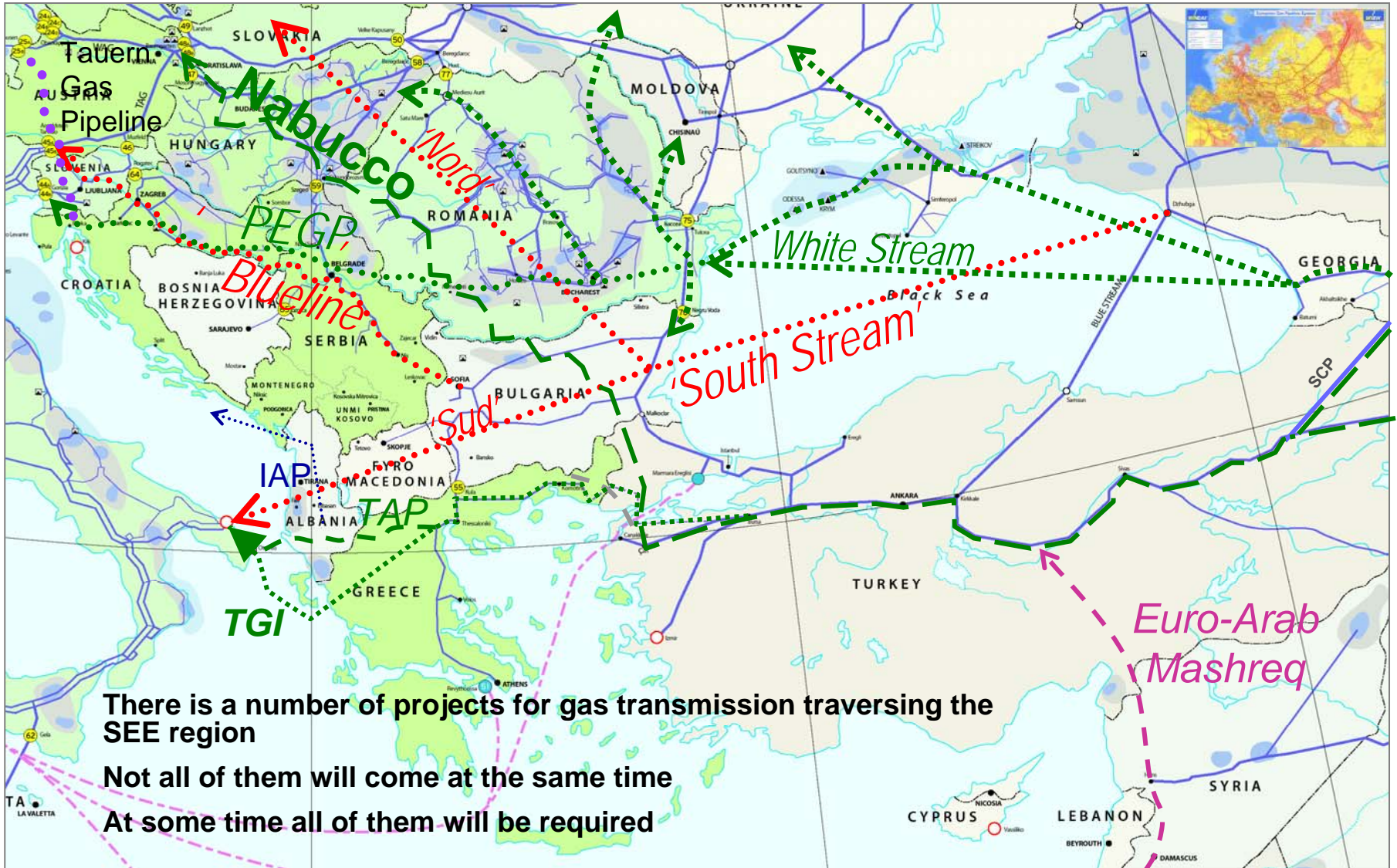
GAS TRANSPORT

SEE region – gas sources of interest



GAS TRANSPORT

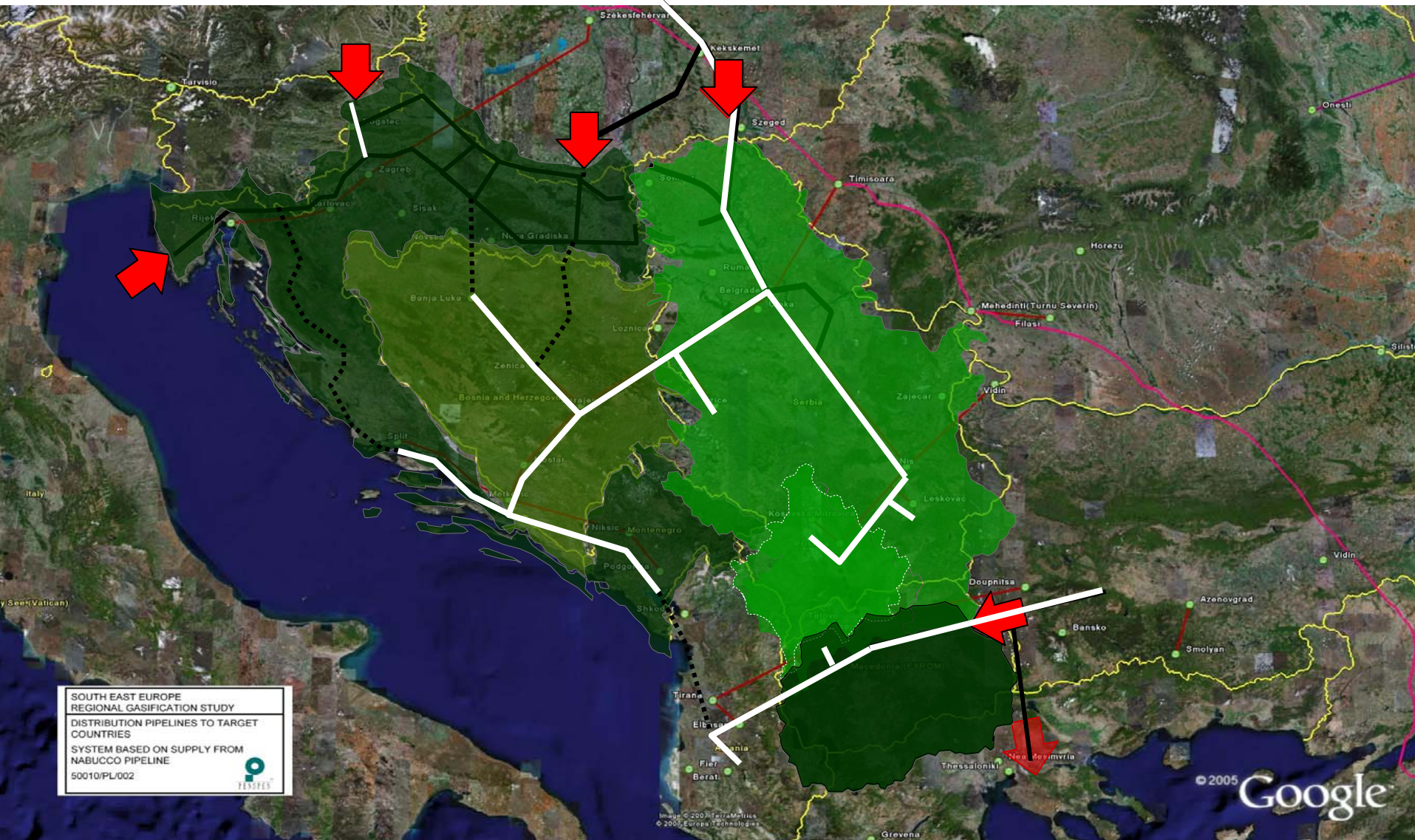
SEE region – new gas transmission projects



There is a number of projects for gas transmission traversing the SEE region
 Not all of them will come at the same time
 At some time all of them will be required

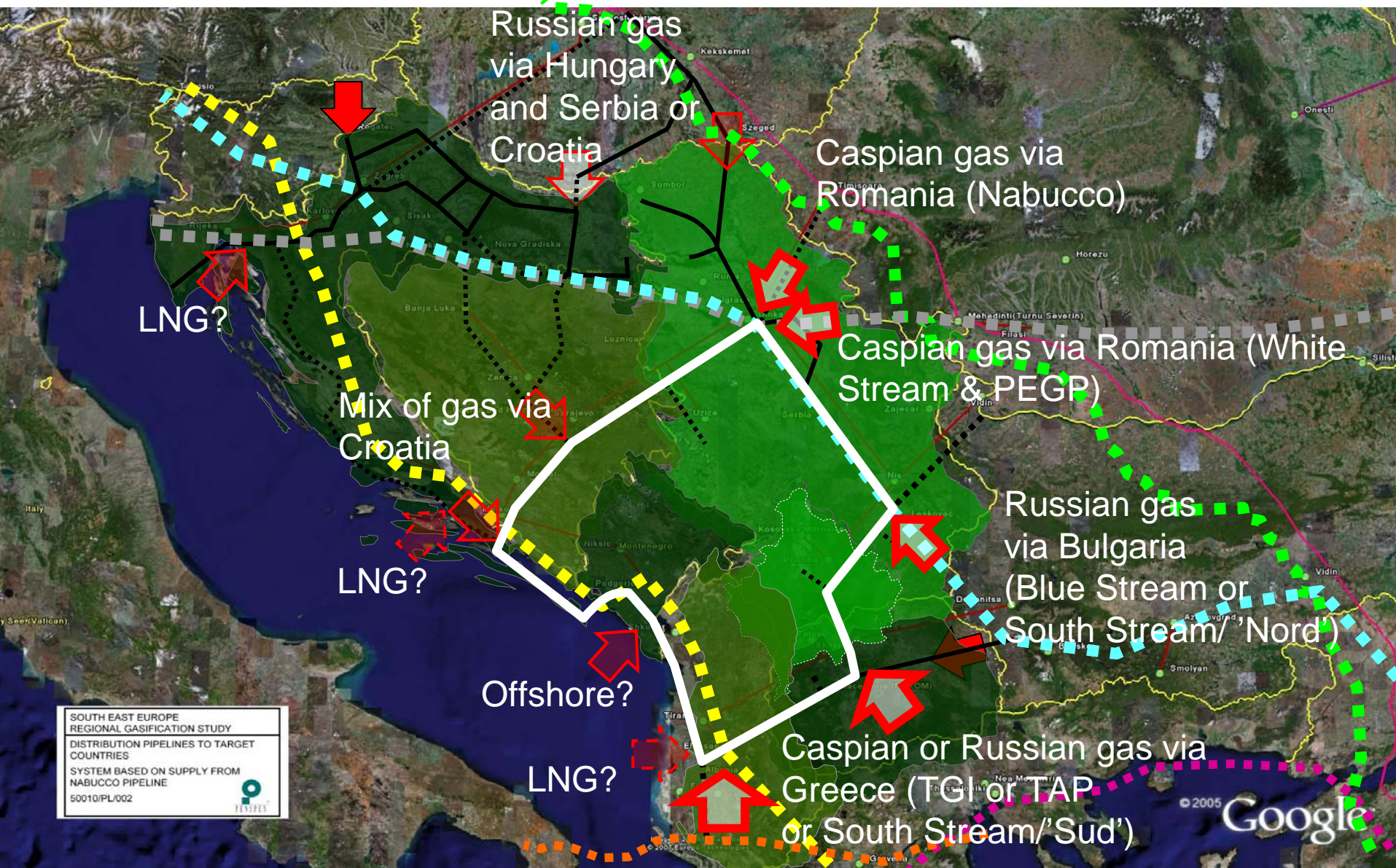
GAS TRANSPORT

Energy Community region – new transmission lines for russian gas



GAS TRANSPORT

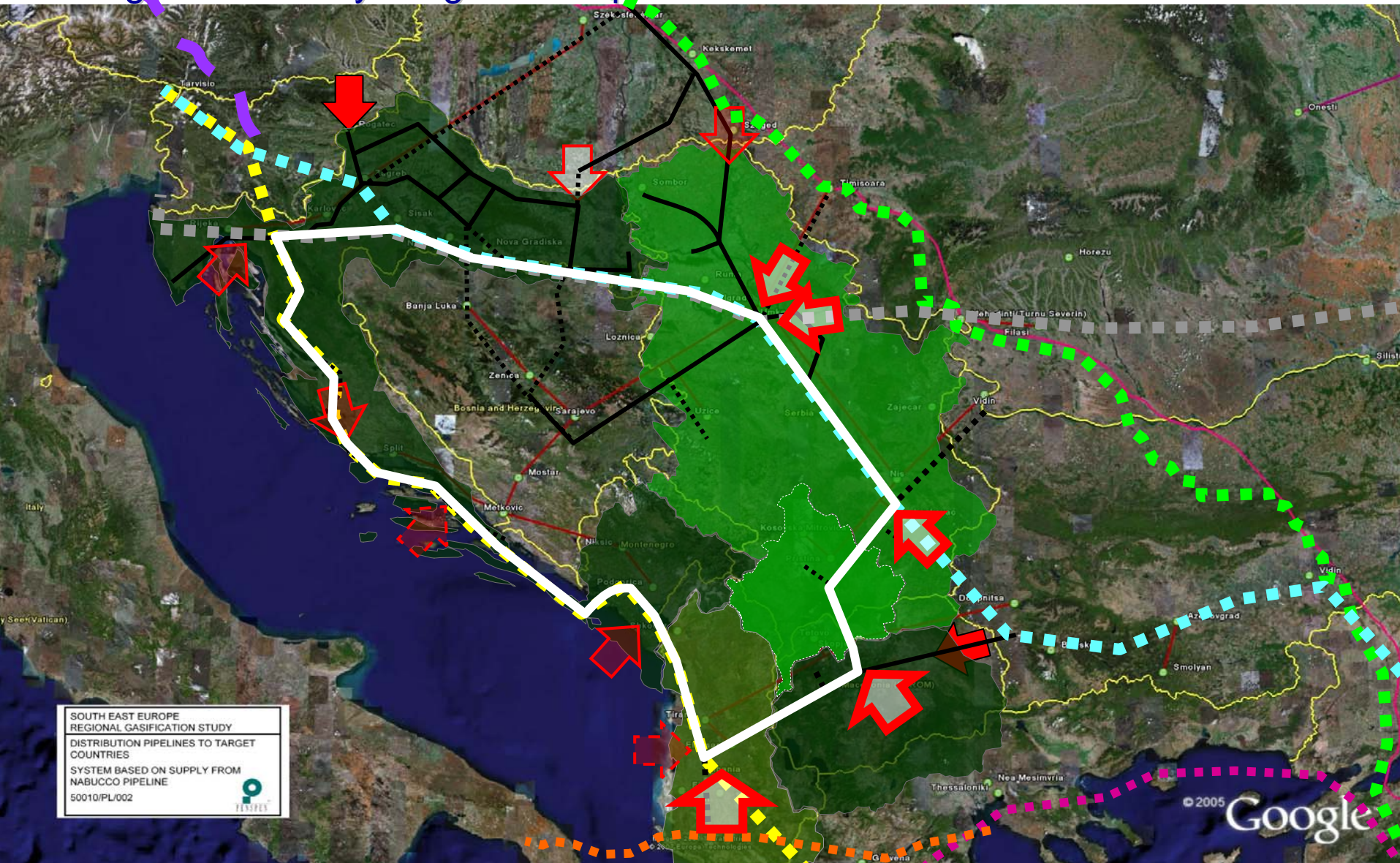
Energy Community Ring – concept 1



SOUTH EAST EUROPE
 REGIONAL GASIFICATION STUDY
 DISTRIBUTION PIPELINES TO TARGET COUNTRIES
 SYSTEM BASED ON SUPPLY FROM NABUCCO PIPELINE
 50010/PL/002

GAS TRANSPORT

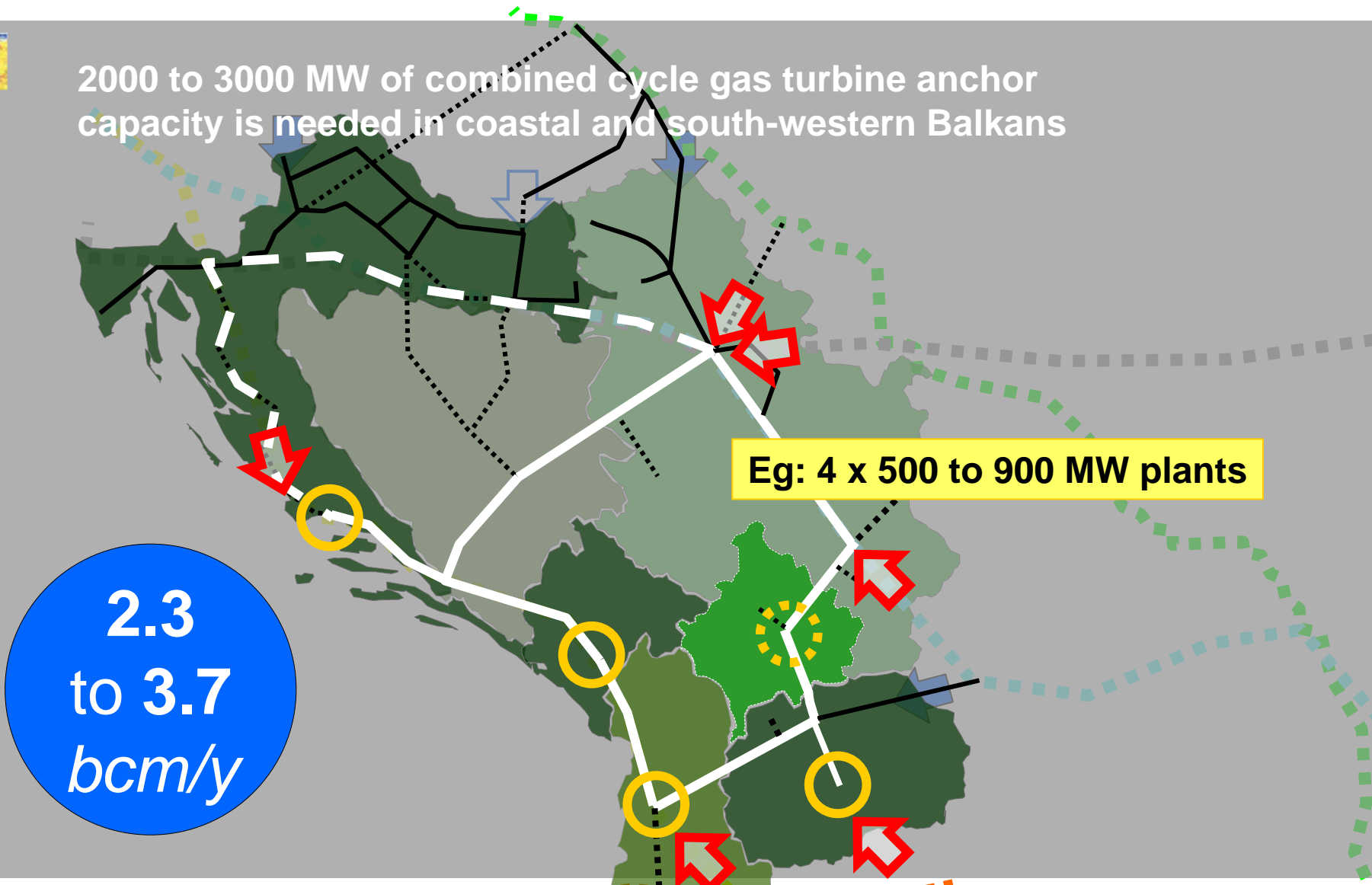
Energy Community Ring – concept 2



GAS TRANSPORT

Energy Community region – new gas fired power generation projects

2000 to 3000 MW of combined cycle gas turbine anchor capacity is needed in coastal and south-western Balkans



2.3
to 3.7
bcm/y

Eg: 4 x 500 to 900 MW plants

- **Energy Community Contracting Parties**

- **Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Serbia, UNMIK**

- **Energy Community Treaty**

- **Implementation of the Energy Acquis (Directives 2003/54/EC, 2003/55/EC, 2004/67/EC, 2005.89/EC, Acquis on Renewables, Environment and Competition)**
- **Development of competitive market environment**
- **Regional integration of the energy markets – interconnection capacity market (Regulations (EC) 1229/2003 and 1775/2005)**

Implementation of Directives 2003/54/EC, 2003/55/EC



Electricity	Public Service Obligation and Customer Protection	Monitoring Security of Supply	Technical Rules	Unbundling Provisions and Access to Account	Third Party Access	New Generation Authorisation and Tendering	Market Opening	Cross Border Trade
Albania								
BiH								
Croatia								
the Former Yugoslav Republic of Macedonia								
Montenegro								
Serbia								
UNMIK								
<i>Regional Perspective</i>								

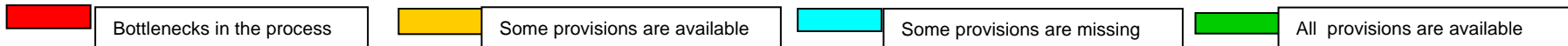
Gas	Public Service Obligation and Customer protection	Monitoring Security of Supply	Technical Rules	Unbundling Provisions and Access to Account	Third Party Access	New Infrastructure and Exemptions	Market Opening	Cross Border Mechanism
Albania								
BiH								
Croatia								
the Former Yugoslav Republic of Macedonia								
Montenegro								
Serbia								
UNMIK								
<i>Regional Perspective</i>								



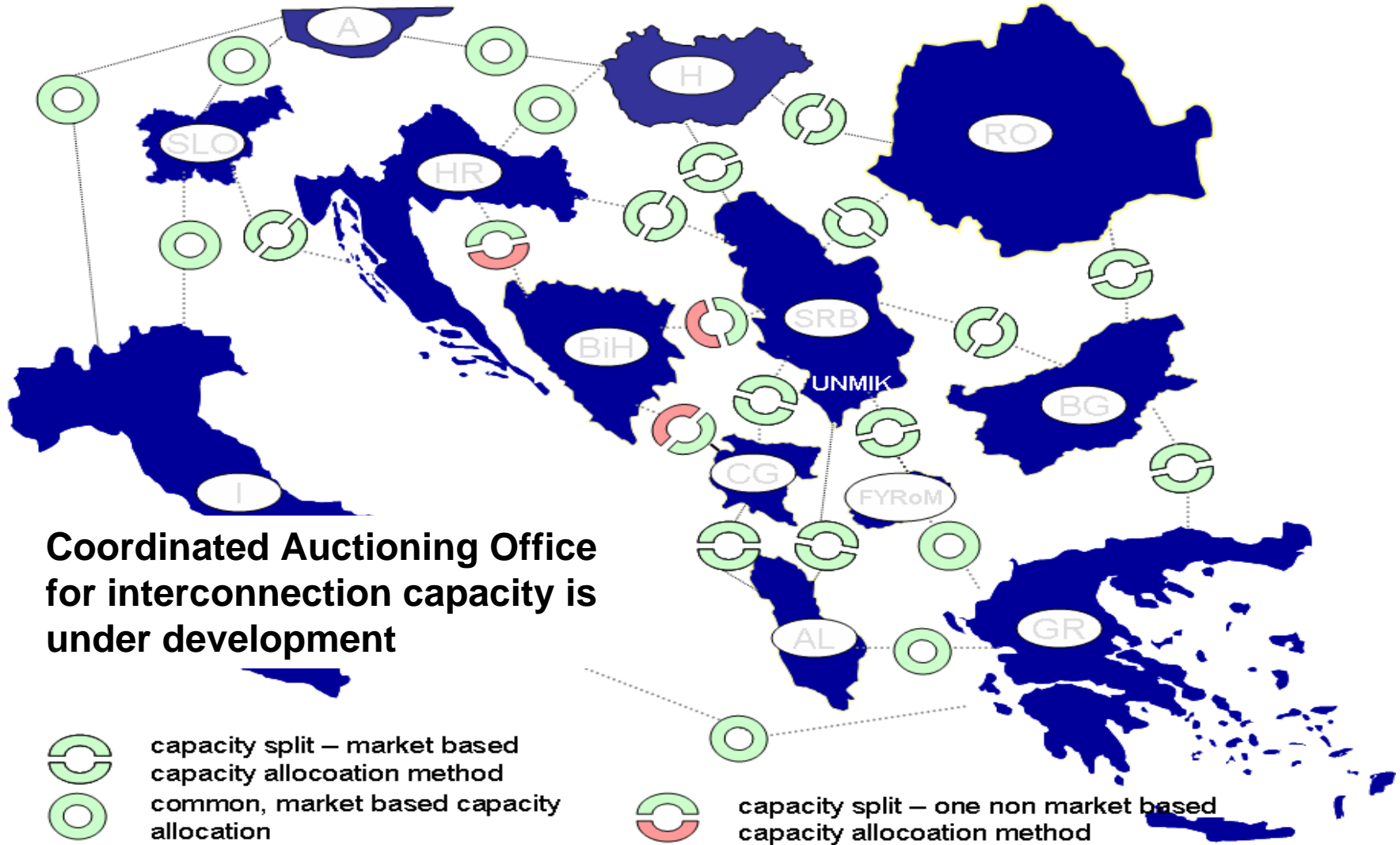
Development of the electricity and gas markets

Electricity	Directive 2003/54/EC	Market Structure	Wholesale Market	Retail Market	Tariff Reform Affordability	Market Integration
Albania						
BiH						
Croatia						
the Former Yugoslav Republic of Macedonia						
Montenegro						
Serbia						
UNMIK						

Gas	Directive 2003/55/EC	Market Structure	Wholesale Market	Retail Market	Tariff Reform Affordability	Market Integration
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BiH						
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Montenegro						
Serbia						
UNMIK						



Transmission Capacity Market - Electricity



**THANK YOU
FOR YOUR ATTENTION**

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