

World Bank and Energy Community Secretariat

Gas to Power in South East Europe: Prospects and requirements

PHLG meeting, 19 March 2014, Brussels

Ray Tomkins, ray@eca-uk.com

Fred Beelitz, fred.beelitz@eca-uk.com

Naske Afezolli, naske.afezolli@ia-see.com

**ECONOMIC
CONSULTING
ASSOCIATES**
41 Lonsdale Road
London NW6 6RA UK
tel +44 (0)20 7604 4546
fax +44 (0)20 7604 4547
email: info@eca-uk.com

www.eca-uk.com

ECA

Outline

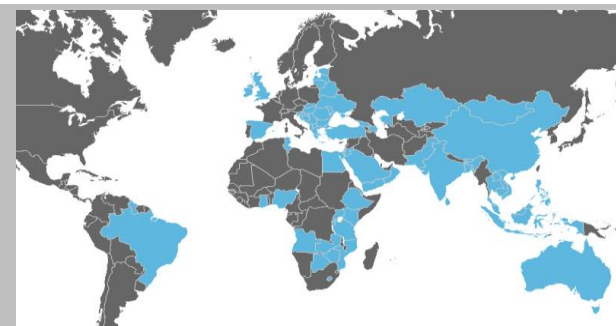
- ❑ Introduction to the study
- ❑ Starting points
 - ❑ Gas demand in West Balkan countries
 - ❑ Gas prices
 - ❑ Previous proposal for the Gas Ring
- ❑ A case for gas
 - ❑ The regional concept
 - ❑ A new approach
 - Sub-regional approach
 - PPP
 - Consortium approach

Gas to power in the South East Europe countries



Introduction to ECA

- ❑ **Economic consultancy based in London, UK, established in 1997**
- ❑ **Experience in gas, electricity and water sectors, including**
 - ❑ Gas and power infrastructure economics
 - ❑ Regulatory advice
 - ❑ Energy policy planning
- ❑ **International scope with particular experience in SEE Europe and the West Balkans**
 - ❑ Proposed Gas Ring concept
 - ❑ Gas and electricity market studies
 - ❑ RE integration in power markets
 - ❑ Security of gas supply studies
 - ❑ EE strategy and ESCO design
- ❑ **Clients include WB, EBRD and private sector**



ECA has carried out projects in gas and electricity in over 50 countries in Europe, Asia, Africa, Australasia, Middle East and South America

ECA has substantial experience in energy projects in the West Balkan countries

Gas to Power in South East Europe – the brief

- ❑ **Study for the World Bank and ECS**
- ❑ **Objectives**
 - ❑ revisit the Gas Ring proposals
 - ❑ develop a PPP consortium approach to promote investment in gas and power infrastructure in the region
- ❑ **Focus**
 - ❑ Potential role of gas in the region
 - ❑ Interest of private and public investors
 - ❑ Identifying key conditions required for a PPP consortium
 - ❑ Design the structure and formalisation of the consortium
- ❑ **Propose a roadmap for implementation of PPP consortium approach**

ECA is lead firm in multi-disciplinary team including national and international infrastructure financing experts as well as law firms Allen & Overy and Karanovic/Nikolic



ALLEN & OVERY

karanovic/nikolic

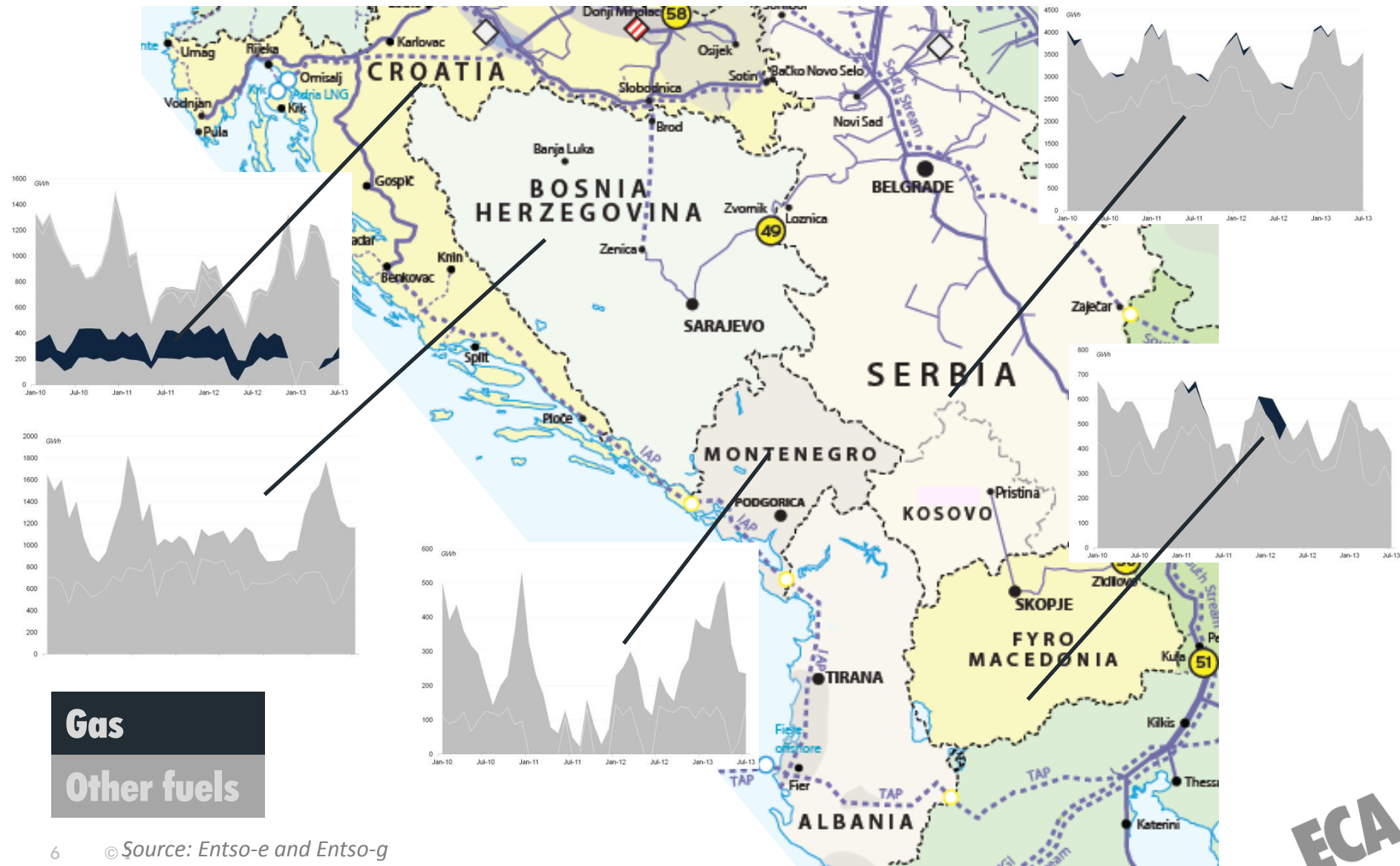
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Gas to power in the South East Europe countries



Gas only plays a small role in power generation mix – hydro, lignite dominate

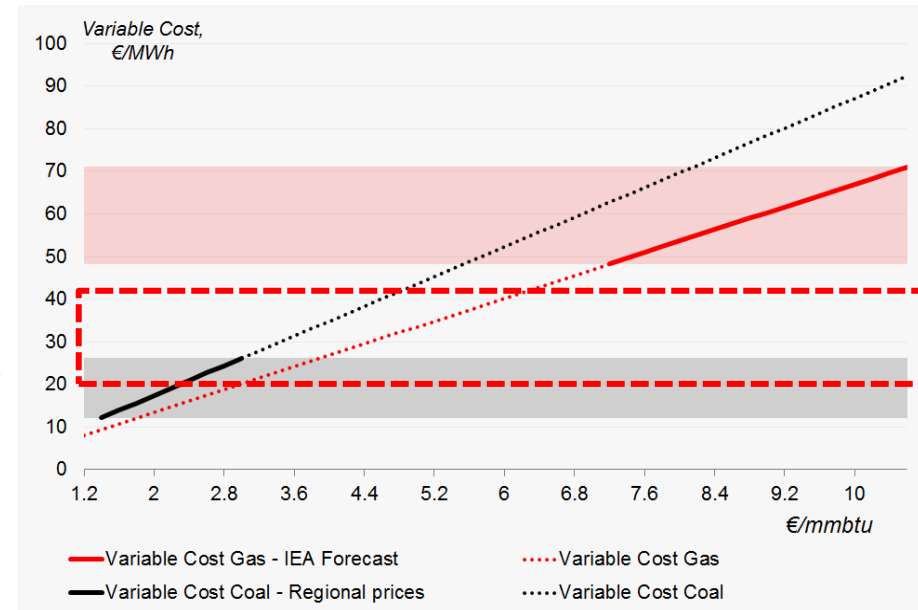


Gas prices currently not competitive compared to hydro and lignite/coal



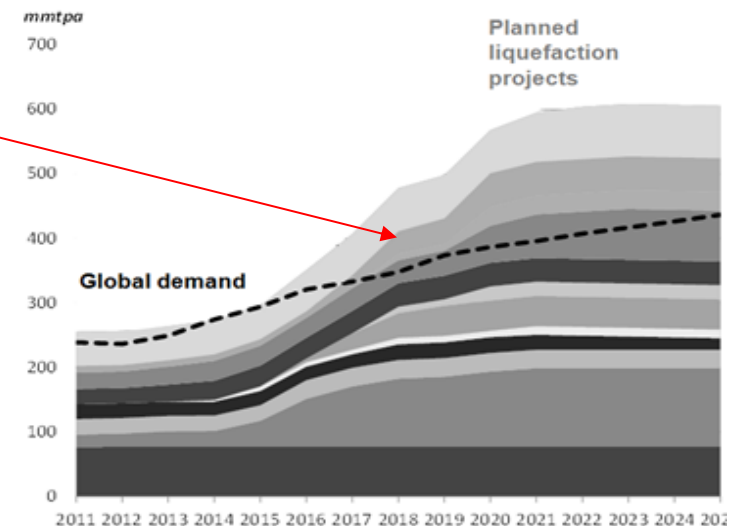
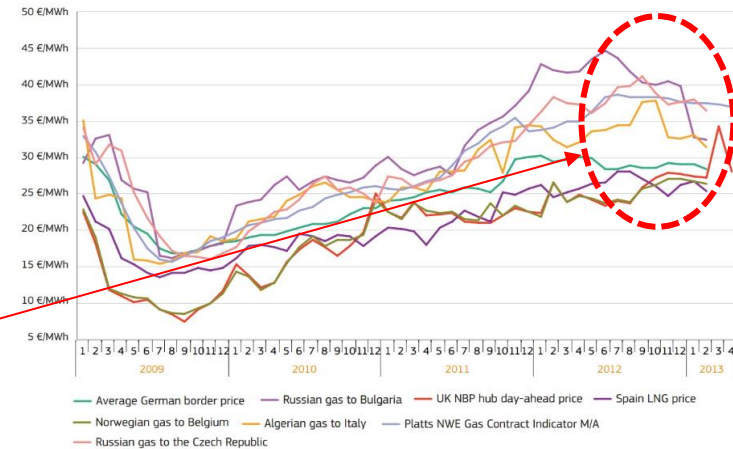
Widening price spread between coal and gas

Variable costs of power generation for gas above electricity price range between 20 and 40 €/MWh



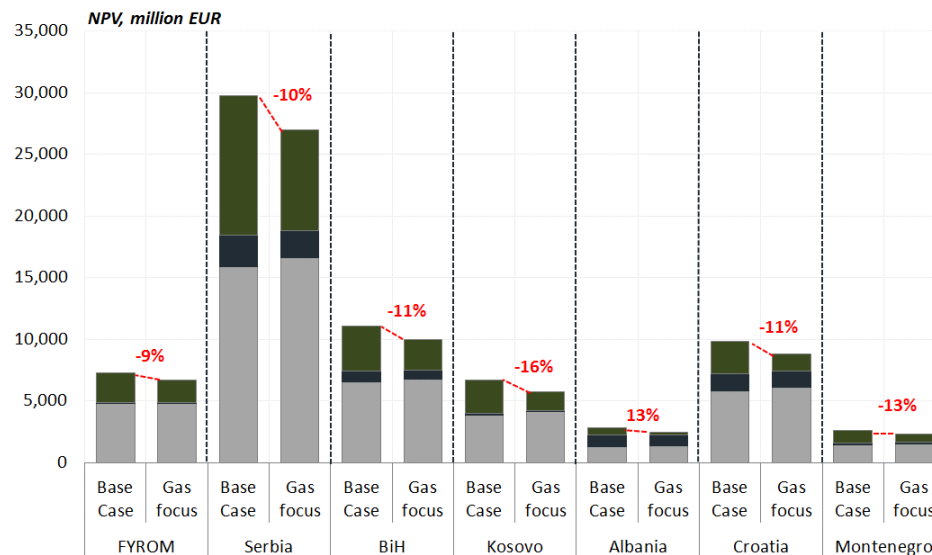
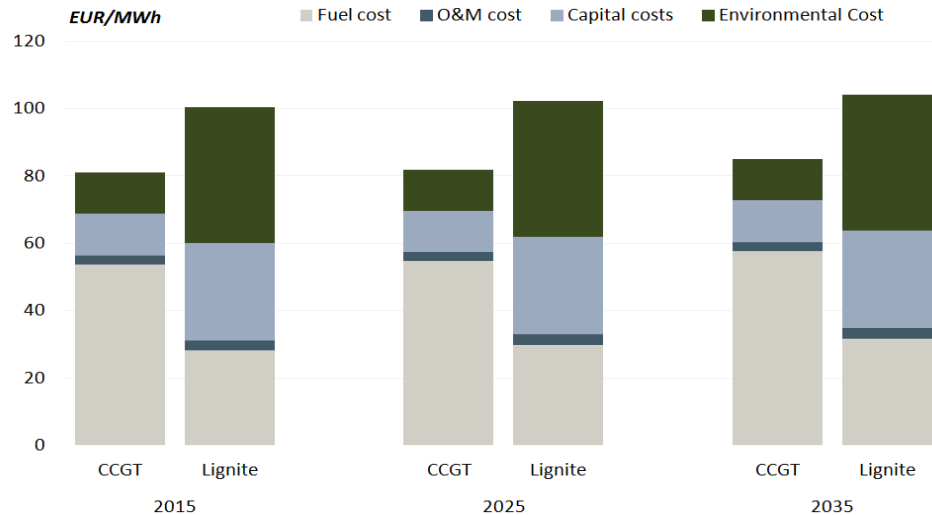
Reason for optimism - factors that may improve gas to power investment opportunities

- ❑ Access to more diversified supply sources – eg LNG and Azeri supplies
- ❑ Downward gas price pressure from:
 - ❑ Shift in gas trading in Europe from long term contracts to spot markets – convergence of prices
 - ❑ Global oversupply of LNG in medium to long term possible
- ❑ Age of existing power plants
- ❑ Environmental commitments
- ❑ Political commitments – gas features as prominent fuel in future development plans with 1,940 MW planned by 2020



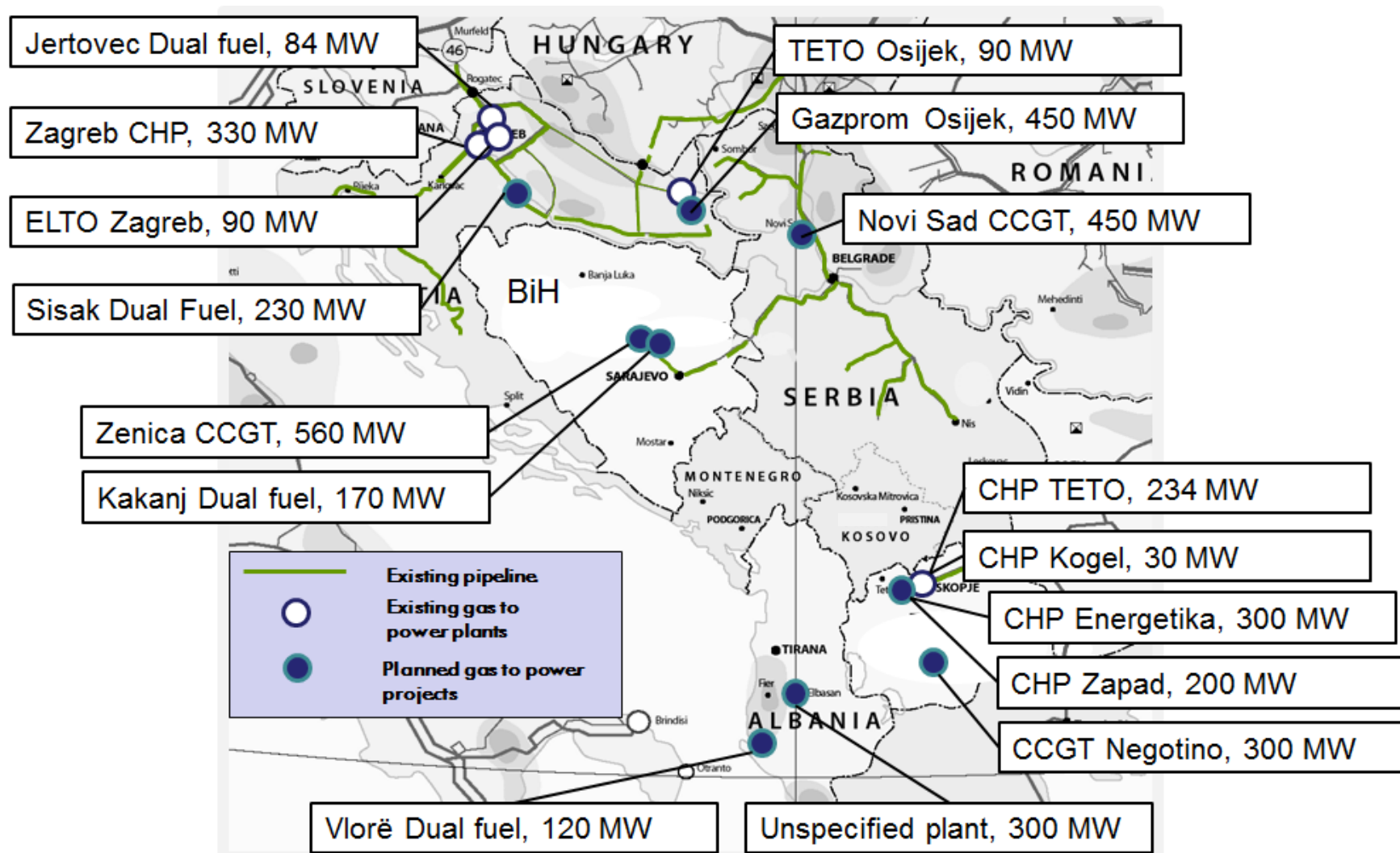
Economic cost of electricity generation:

Gas may be lower than lignite



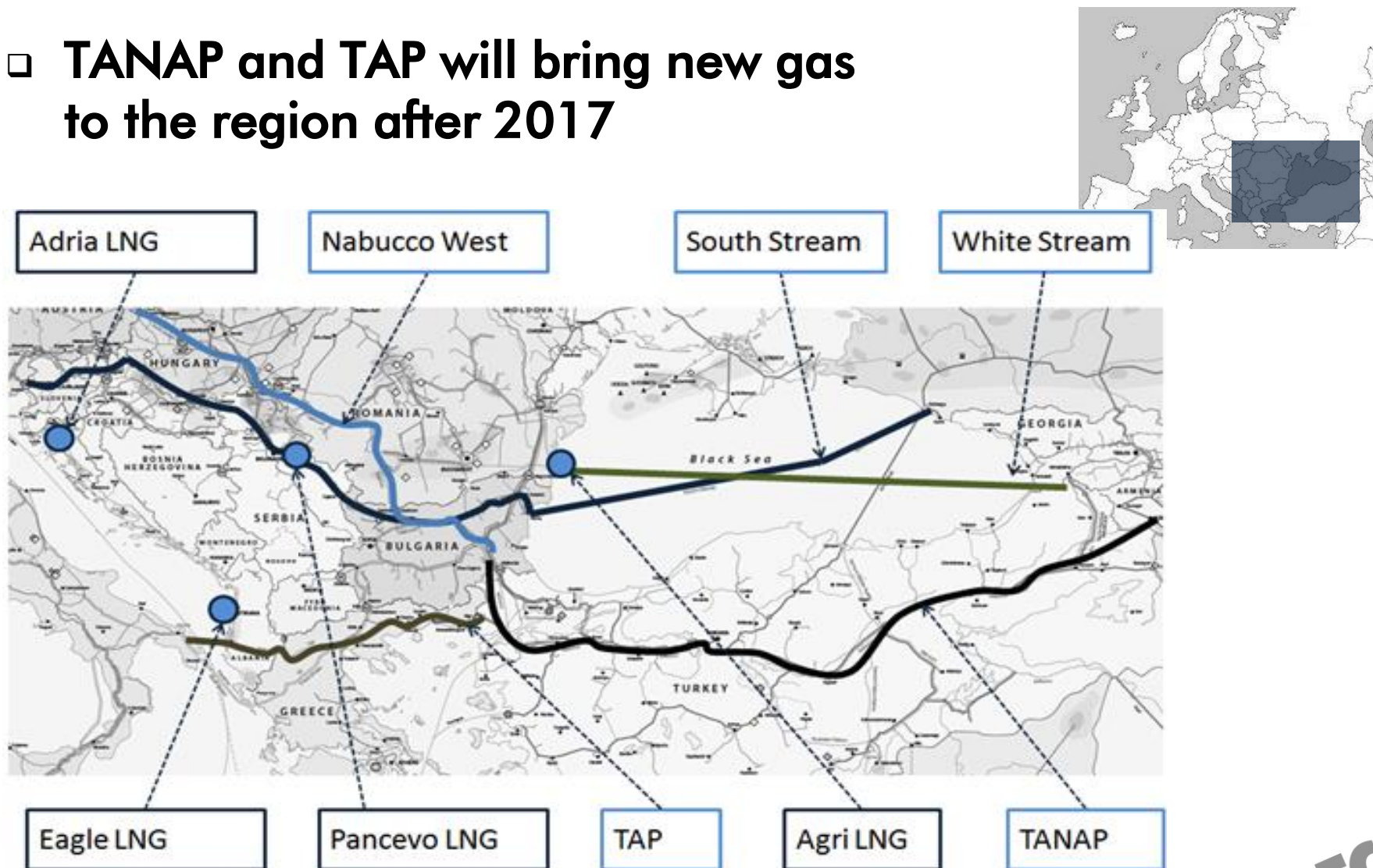
- On a financial basis, gas is currently not attractive compared to lignite
- Considering the environmental costs, gas may be the preferred options
- Across all countries, the NPV (over 30 year time horizon) of total costs (including environmental costs) may be lower for gas than for lignite

Existing and planned gas fired power plants in West Balkans

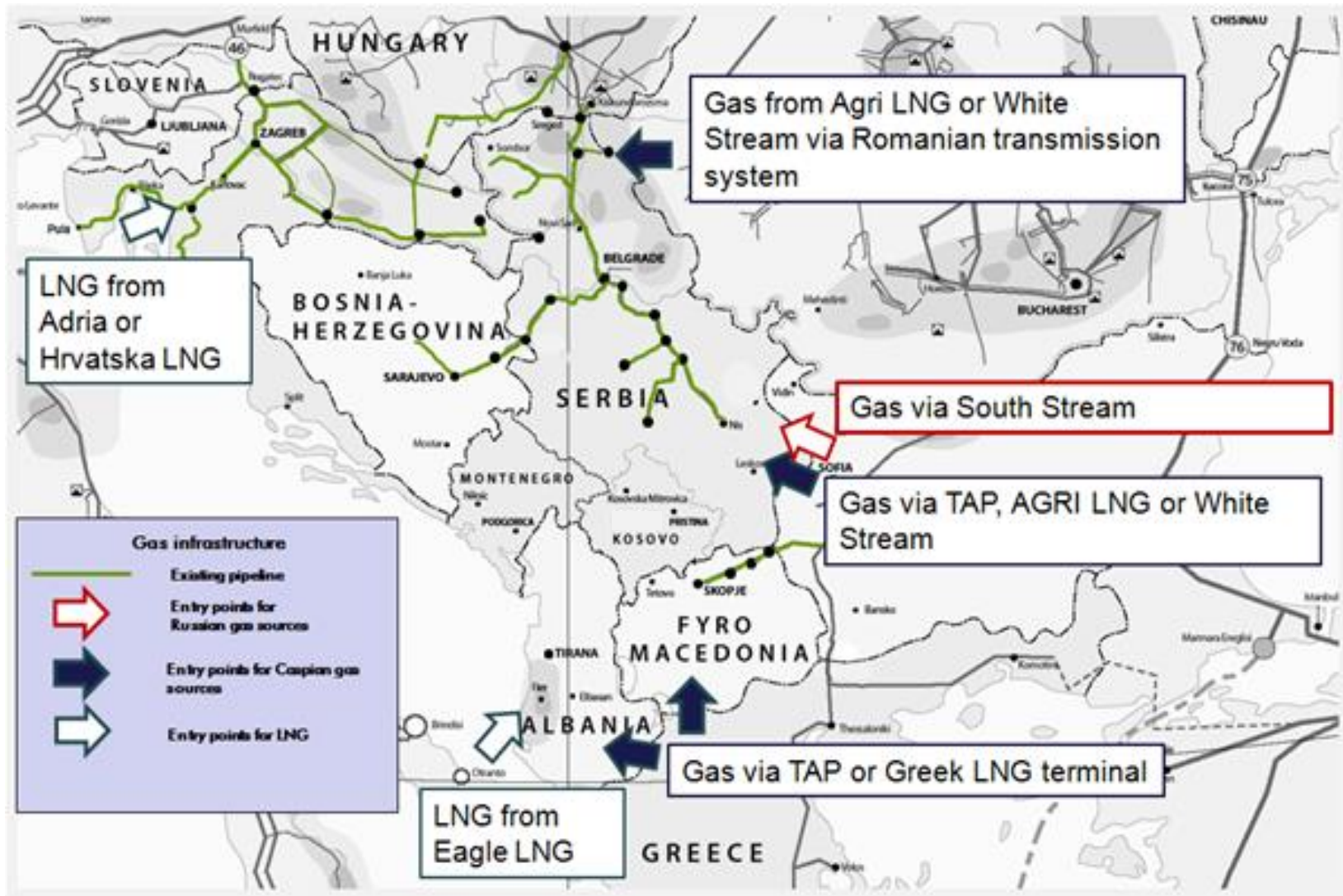


Many proposed regional projects that could diversify supply sources for the region

- ❑ TANAP and TAP will bring new gas to the region after 2017



New gas supply entry points for Russian, Azeri gas and LNG are proposed



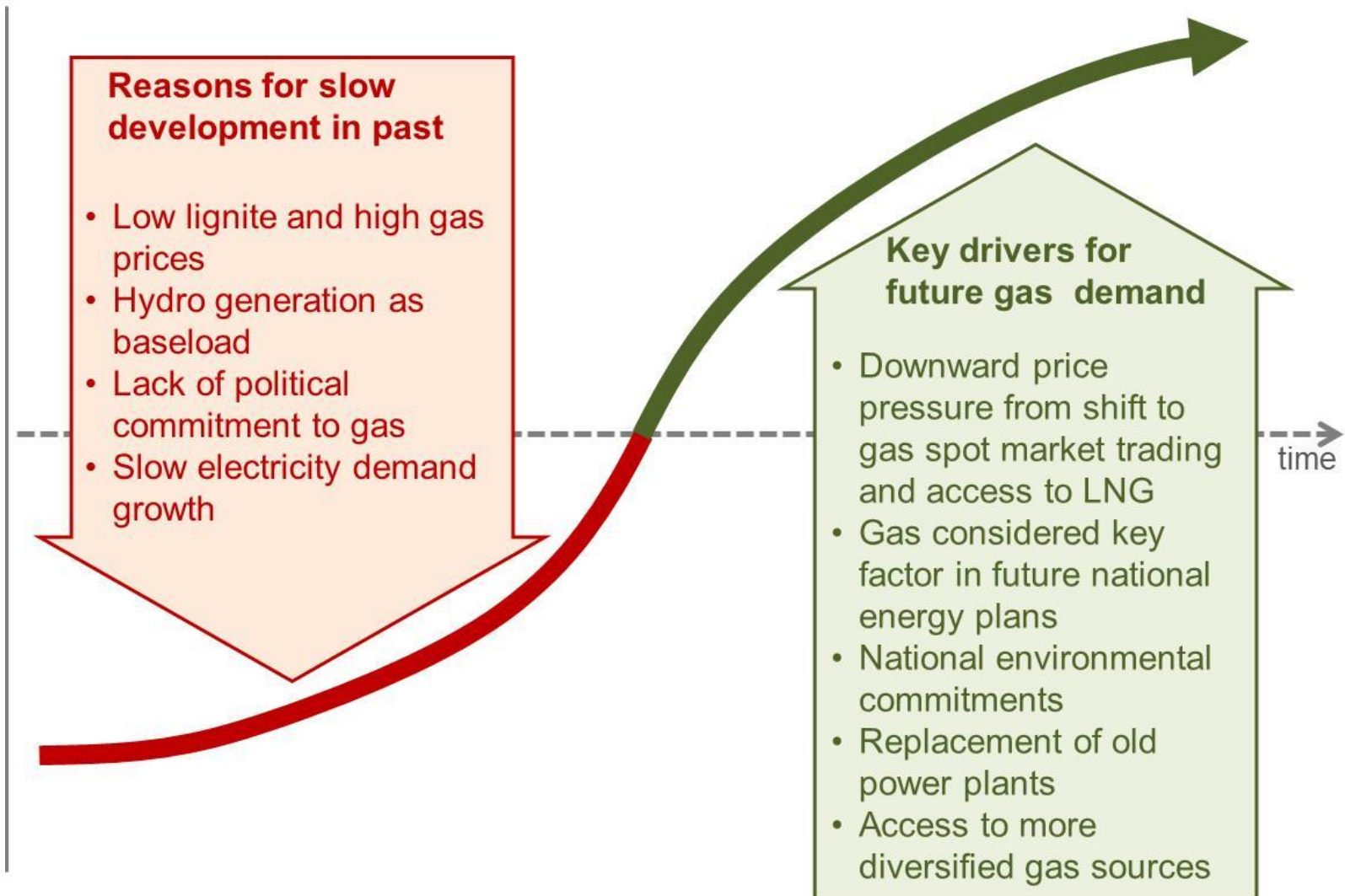
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Opportunities for gas to power investment to improve in medium term



The regional concept: Gas Ring as proposed in 2008/9



A new approach

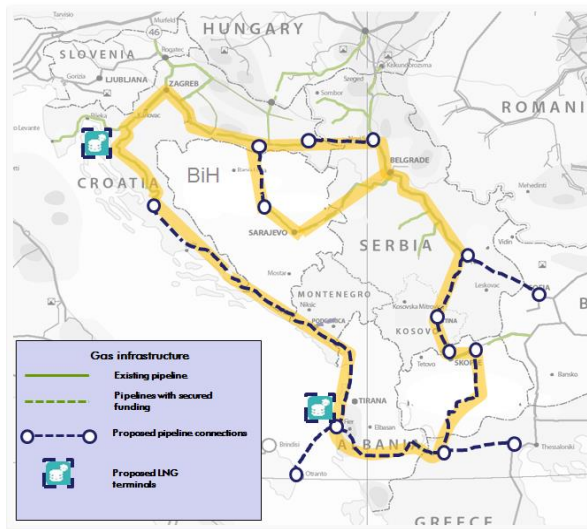
- ❑ Coordination among all 7 countries simultaneously is difficult (eg elections!)
- ❑ Start with projects involving smaller sub-regions of SEE
- ❑ TAP, possibly LNG, will create opportunities
- ❑ Engage the private sector to maximum extent
- ❑ Private sector investors are common approach in power IPPs and LNG terminals
- ❑ Pipelines and transmission lines are more difficult
- ❑ Bring parties together in a consortium (one or more) structured to facilitate financing

❑ **Sub-regional approach**

❑ **PPP**

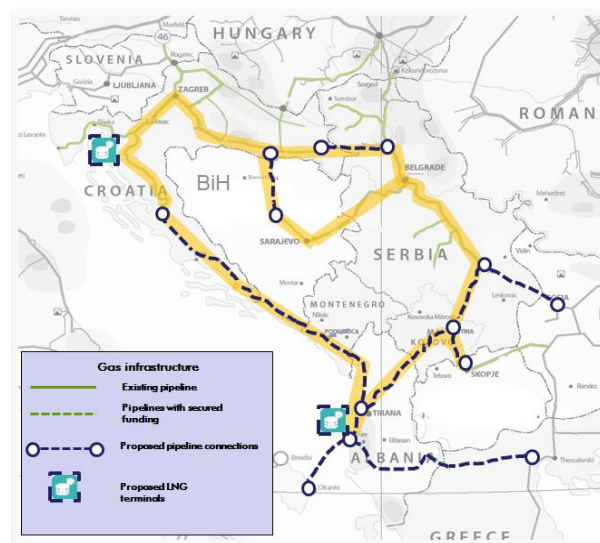
❑ **Consortium**

Three different options and sub-regional steps towards full development



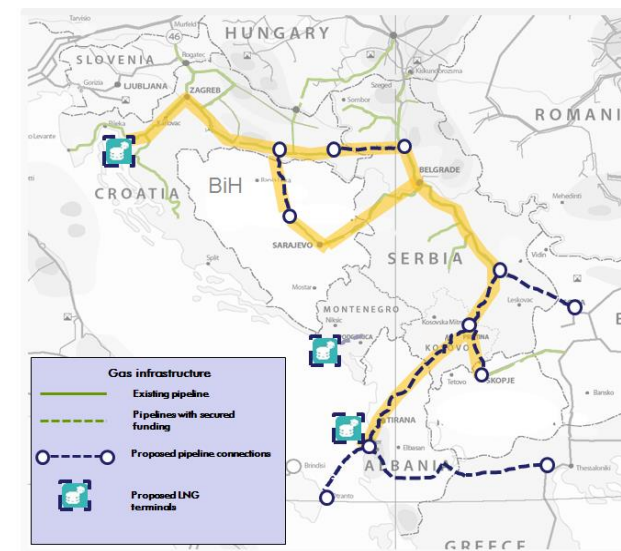
Option 1

- ❑ Updated version of Gas Ring concept
- ❑ TAP/IAP interconnection
- ❑ Link from Greece (TAP) > Macedonia > Northern countries
- ❑ Key supply sources: TAP, LNG, South Stream



Option 2

- ❑ Integration with TAP only in Albania
- ❑ Albania-Kosovo interconnector
- ❑ Short link to Macedonia
- ❑ Key supply sources: same as Option 1



Option 3

- ❑ LNG focused strategy
- ❑ Same supply route for Kosovo, Macedonia as option 2
- ❑ LNG terminal in Montenegro, as well as Albania, Croatia

Consortium: promote buy-in from public and private investors



- ❑ Consortium will assist project development by improving economies of scale
- ❑ Could be smaller consortia within the region (sub-regional approach)
- ❑ Public and private entities (PPP)
- ❑ Potential parties to express interest
- ❑ Design suitable consortium structure

The consortium approach – next steps

- ❑ **Structure and legal status of the Consortium**
- ❑ **Role of PPPs** – maximise private sector leverage on public sector financing
- ❑ **Financing infrastructure** – investment and ownership
- ❑ **Electricity offtake arrangements** – spread their risk across different downstream credit-worthy offtakers
- ❑ **Gas buying arrangements** – which parties underpin the gas purchasing? Long term contract or spot?
- ❑ **Payment mechanisms, guarantees – spreading the risk** – role of guarantees and potential guarantors

Project proposals
One or more groups of countries

Expressions of interest
Private and public parties – ‘in principle’ commitment

Structuring the Consortia
Ensuring each Consortium improves risk allocation, project economics, and financeability

Roadmap

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