

Western Balkans Study

Gas to Power in South East Europe: A Consortium Approach

Summary Recommendations and Next Steps

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Western Balkans Study - 2013

- ▶ **Funded by WBIF – Joint Grant Fund and WB-ESMAP**
- ▶ **Implemented by the World Bank in partnership with the Energy Community Secretariat (ECS)**
- **Objectives**
 - Identify investment options for regional gas market integration
 - 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**

Interim Report - financing for gas projects would require public funding; no investor interest in consortium

- ▶ Gas is not competitive compared to lignite
- ▶ Power generation required as anchor load for development of gas infrastructure
 - Lack of government interest and commitment
 - Industrial and residential demand too small to act as anchor load
- ▶ Private financing of gas to power projects cannot be secured
 - regulatory uncertainty
 - lack of creditworthy electricity off-takers
 - electricity prices too low
- ▶ Gas to power development still heavily reliant on EU and IFI support for
 - Funding
 - Technical support

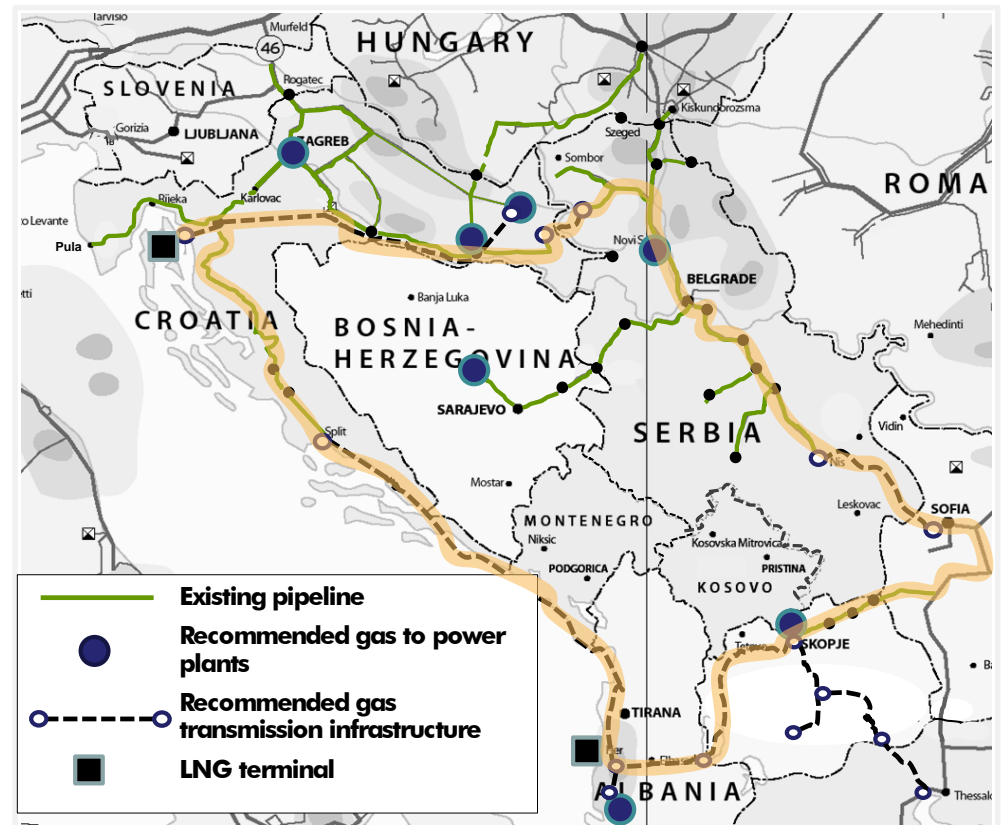
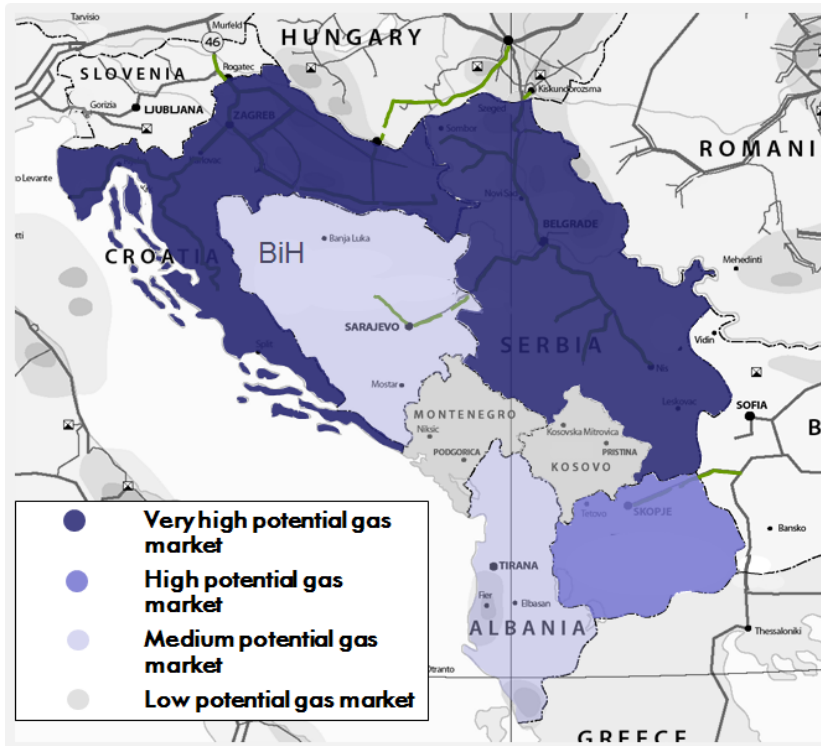
Nevertheless: Reasons for “Cautious Optimism” for Gas

- ▶ Downward gas price pressures:
 - Favourable crude oil price development
 - Oversupplied and increasingly liquid global gas market
 - Shift in gas trading patterns from long term contracts to spot markets (e.g Croatia)
- ▶ Access to more diversified gas sources for the region, TAP and LNG Croatia
- ▶ Age of existing power plants
- ▶ Environmental commitments of West Balkan countries
 - Economic case for gas: lowest cost when taking into account environmental costs
- ▶ Individual countries in the region with well established gas markets

Focus on high potential markets and projects that help toward a regional market

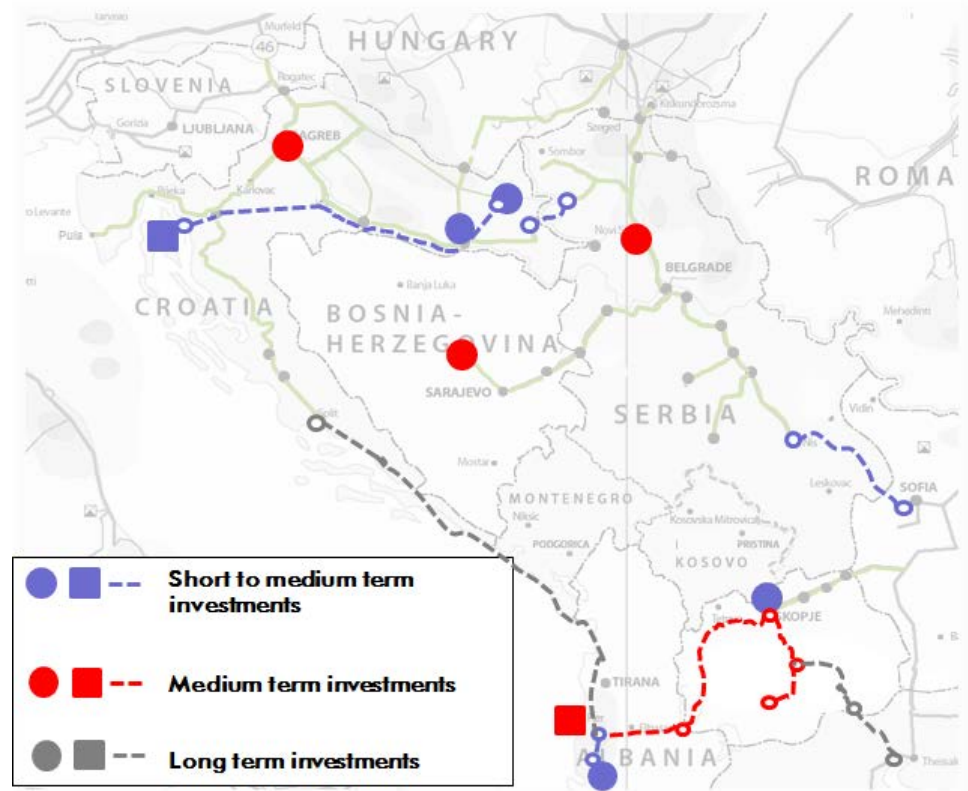
- ▶ **Gas to Power** - selection of gas to power investments that
 - integrate SEE gas markets
 - link the region to EU markets
 - have high development potential and public and private sector interest
- ▶ **Market focus** - Croatia, Serbia and FYR of Macedonia gas markets with highest development potential
 - Existing markets and infrastructure
 - Favourable power sectors
 - Linkages to EU and/or diversified gas supply
- ▶ **Sequential investment strategy** to accommodate for differences of gas market potential in the region
 - First focus should be on small number of projects that can enable regional market development

Phasing of the Gas Ring focusing on projects with best prospects and markets with highest potential



Investment strategy - sequential investments with long term aim of achieving a regional gas market

- ▶ Proposed development strategy - 3 groups of investments:
 - **Short to medium term investment bundle** - Projects and markets that are most feasible (€1,790 million)
 - **Medium term investment bundle** – Projects to further develop gas usage (€1,865 million)
 - **Long term investment bundle** - Investments that require other investments first before becoming feasible (€765 million)



Coordinated and concerted financing strategy with strong EU/IFI involvement and support

- ▶ **EC would need to play a leading role for grant funding**
 - Focus on LNG and gas pipelines
 - Mainly grant funding from the EU/IPA funds
 - Supporting PCI/PECI with similar financing and regulatory mechanisms
- ▶ **IFIs could complement EC grant funding**
 - Focus on power generation
 - Concessional loans/guarantees
- ▶ **WBIF continue to act as key coordinating entity**
 - Coordinating role
 - Overseeing technical assistance projects vital for gas to power development
 - IPA funds for investment co-financing through the WB Connectivity

Key lessons drawn from the Study (Interim Report)

- ▶ An **in-depth analysis** of gas infrastructure prospects in the Western Balkans was needed
 - Gas markets development options
 - Most promising investment projects
 - Country-by-country and regional analysis
- ▶ An analysis of financing options, mainly with regards to the need for **blending EU grants with IFIs financing**, is crucial
- ▶ It will help public decision makers set their **priorities** and allocate resources to gas projects that have better prospects to be developed.

Two Options for next steps for SEE Gas to Power project

▶ **Option 1: prepare high priority projects**

- Detailed investment appraisals for high priority projects (pre-feasibility)
- Develop cost estimates and financing plans for consideration
- Build on existing studies
- Amendment of the Implementation Agreement required

▶ **Option 2: suspend or stop the study now**

- Suspend: Re-start the effort when conditions have become more conducive (slide on “cautious optimism), or
- Cancel: Prepare a new study later (or leave gas project development to individual countries and sponsors)

Thank you for your attention!

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Back-up slides

Approach for Option 1

Investment appraisal components

Tools/models

Project feasibility indicators

Economic feasibility

Security of supply impact
Environmental impact
Budgetary impact

Economic cost benefit analysis

- EIRR
- Economic NPV

Commercial feasibility

Project utilisation
Project profitability
Financing requirements

Financial model
Market analysis

- IRR/NPV
- Cash flow projections
- P&L statements

Risk analysis

Financial risk, demand risk, regulatory risk, political risk, currency risk, technical risk, security of supply risk

Risk assessment matrix

- Project risk
- Mitigating measures

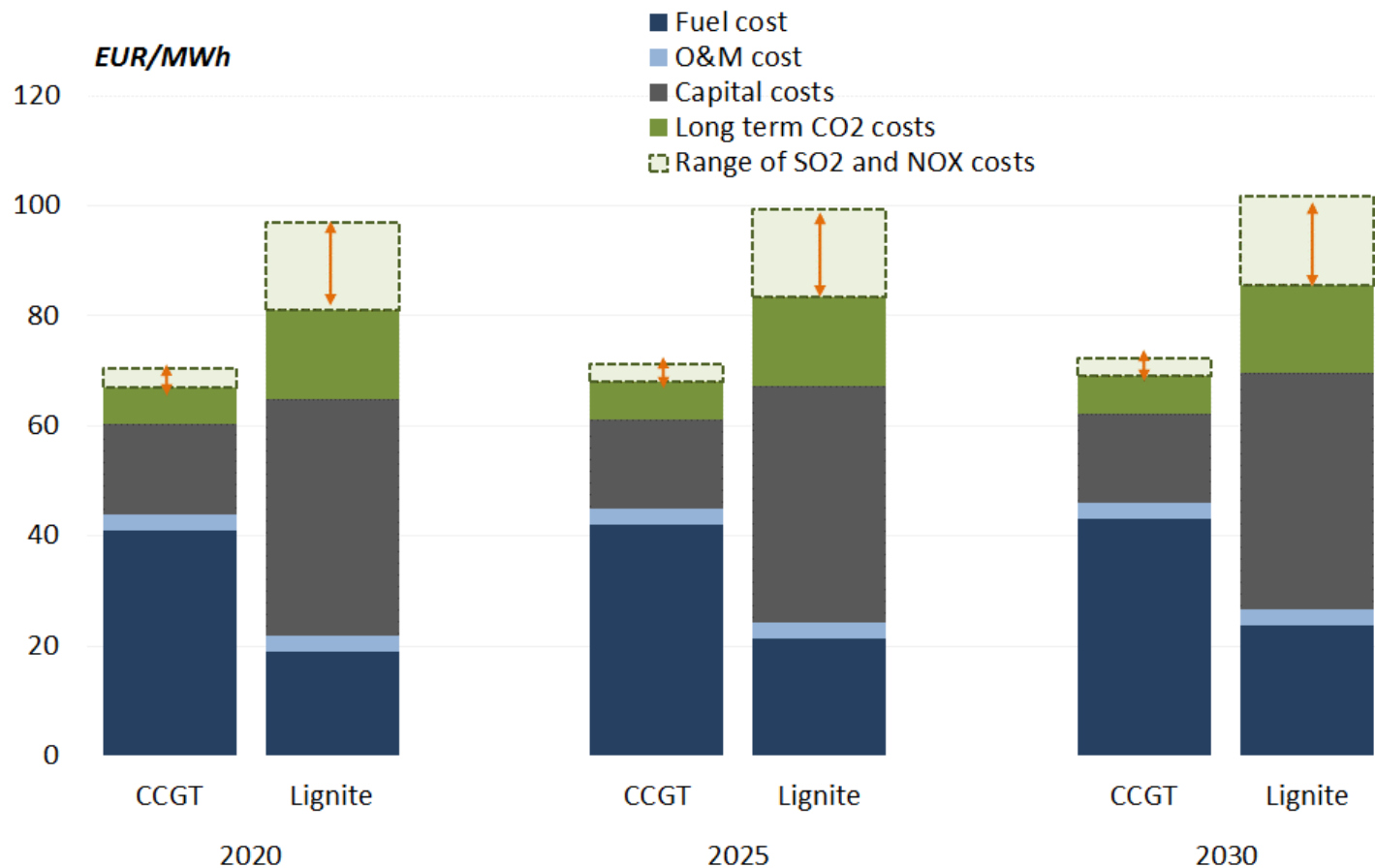
Business model analysis

Building blocks of business models
Value chain analysis

Business model design

- Ownership structure
- PPP arrangements
- Financing structures

Economic case for gas vs. lignite (generic analysis for West Balkans – will vary across countries)



List of prioritised projects

Project	Country	Type of infrastructure	Cost (mm €)
Investment group 1: short to medium term			
Bosiljevo – Sisak-Slobodnica	HR	National pipeline	270
Vlorë – Fier	AL	National pipeline	50
IC Serbia - Bulgaria	RS/Bul	Interconnector	120
IC Sotin – Baco Novo Selo	HR/RS	Interconnector	30
CCGT Crodux OR	HR	Gas CHP	550
CCGT Osijek	HR	Gas CHP	450
Energetika (Skopje)	FYROM	Gas CHP	250
Vlorë refurbishment	AL	Dual Fuel CHP	20
Croatia LNG	HR	LNG	500
Total capital cost for investment group 1			1,790
Investment group 2: medium term			
Skopje-Ohrid	FYROM	National pipeline	110
Klecovce - Negotino	FYROM	National pipeline	65
IC Fier – Ohrid	AL/FYROM	Interconnector	140
Novi Sad CHP	RS	Gas CHP	320
EL-TO Zagreb	HR	Gas CHP	130
Zenica CCGT	BiH	Gas CHP	400
Eagle LNG	AL	LNG	700
Total capital cost for investment group 2			1,865
Investment group 3: long term investments			
Ionian-Adriatic-Pipeline	HR/ME/AL	Regional IC	620 - 170 (AL) - 120 (ME) - 330 (HR)
Stip – Gevgelija	FYROM	National pipeline	95
Gevgelija – TAP offtake (GR)	FYROM/GR	Interconnector	50
Total capital cost for investment group 3			765