

Investment and Financial Implications from SE Europe's Energy Outreach

6th Balkan Energy Finance Forum
16-17 October 2013
Zagreb, Croatia

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I. SE Europe Energy Outlook

- Rising energy demand is predicted over the next 5 to 10 years but at a much slower pace than previously forecasted because of curtailed economic growth in most countries in the region
- Coal will continue to be relevant for power generation as a strategic fuel
- There is an urgent need to replace antiquated and low efficiency thermal electricity plants
- Inadequate progress in electricity and gas market liberalization is observed and therefore competition among suppliers is delayed
- Very high net hydrocarbon import dependence and unsatisfactory import diversification for most SEE countries
- There is a need to increase indigenous oil and gas output and explore for new deposits



II. SE Europe Energy Outlook

- Plans for the construction of South Gas Corridor projects must be accelerated so that new gas pipelines are in place by 2020, in order to meet rising European gas demand and help with diversification of supplies
- Azerbaijan has key role to play as supplier and prospective hub for European gas supply
- Positive investment climate with East Balkans and Turkey far ahead of Western Balkans in terms of actual investments and project implementation
- RES penetration has been rapid in Greece, Bulgaria, Romania and Turkey thanks to combination of high priced incentives. However, this is fast changing with sharp reductions in FIT's but RES will continue their growth pattern but at a lower pace



III. SE Europe Energy Outlook

- Need to replace and upgrade old and outdated refinery complexes while some major projects under way
- Low infrastructure inter-connectivity in oil and gas
- Need to complete main gas interconnectors in all SE European countries
- Priority must be given to the construction of key interregional oil pipeline projects (i.e. BAP, TAPCO)
- There is a need to further diversify the energy mix of most SEE countries
- RES and Energy Efficiency can play key role by providing decentralized power generation



Major Infrastructure Projects Under Way

- i. A confluence of geopolitical factors and a unique alignment of economic and political forces in SE Europe has taken place over the last 12 months which has enabled a number of decisions to be taken on key infrastructure projects
- ii. As a result, SE Europe's energy landscape is changing rapidly with some major cross border projects now under way, and key infrastructure works, especially in power generation and in the refining sector scheduled for completion over the next five years
- iii. At the same we are witnessing a significant penetration of Renewable Energy Sources (RES) in the energy mix of several countries in SE Europe
- iv. Consequently there are profound positive implications for energy security but also for investment and finance

Mega Projects in SE Europe and the East Mediterranean Region



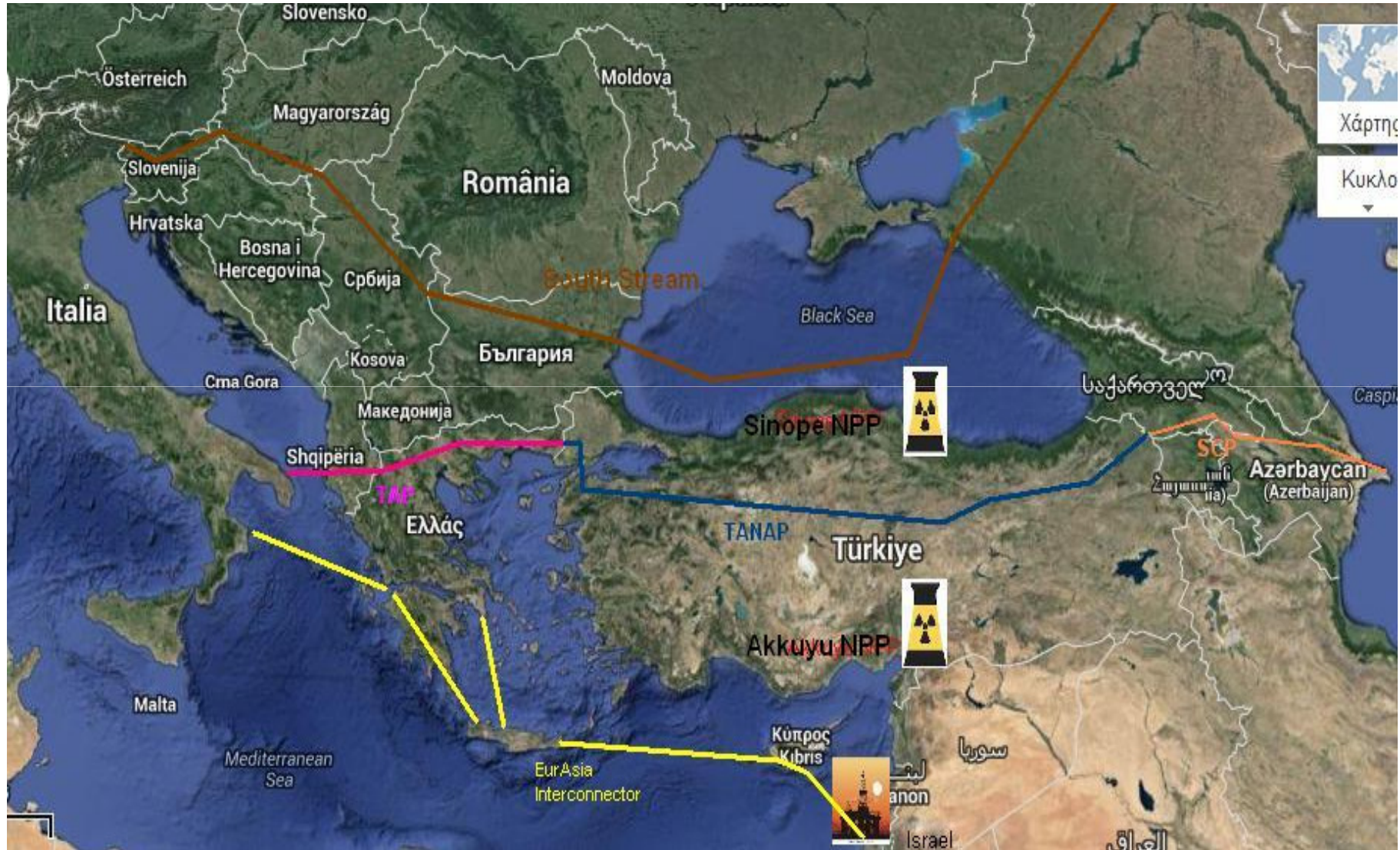
Project	Capacity (bcm/y)	Distance (kms)	Estimated Project Cost (in Billion Euro)	Sponsors	Anticipated Start Up Date	Project Status
TAP	10 – 20	791	1.70	EGL, STATOIL, E.ON	2017	Selected by SDC on June 27,2013
TANAP	16 - 24	2.000	8.0	SOCAR (80%) BOTAS (20%)	2018	Construction to start in 2014
South Stream	63	2.950	26.0	Gazprom, ENI, Wintershall, EDF	2016	Construction commenced December 2012
NPP in Sinope, Turkey	4 – 5 GW	-	17	AREVA, Mitsubishi Heavy Industries (MHI)	2023	Intergovernmental agreements signed
NPP in Akkuyu	4.8 GW	-	20	ROSATOM, Akkuyu NGS Elektrik Uretim Corp	2023	Engineering and survey work started at the site. Construction of the first unit to begin in 2014
Aphrodite Block (Cyprus)	5 Trillion Cubic Feet	-		Noble Energy, Delek Group	2018	Second confirmatory drilling Completed
Liquefaction Plant (Cyprus)	8 – 12 Bcm	-	12	Noble Energy, Avner, Delek Drilling	2019	MoU between Cypriot government and companies
EurAsia Interconnector (Submarine Cable)	2.000 MW	1,000 Km	1.5	DEH-Quantum Energy joint venture	2019	Intergovernmental agreement, feasibilities studies completed
Tamar, Leviathan (Israel)	24 Trillion cubic feet	-			2014	



Total Anticipated Investments in SE Europe, 2010 – 2020*

Sector	Investments (€ Million)
Oil Upstream(Exploration and Production)	40,000
Oil Downstream/Midstream (incl. Liquid <u>biofuels</u>)	25,000
Electricity <ul style="list-style-type: none">▪ Thermal Plants▪ Nuclear Plants▪ Lignite Mine Development▪ Grid-Upgrade & Expansion (incl. metering systems)	90,000
Gas <ul style="list-style-type: none">• Main and branch gas pipelines• Gas storage facilities• LNG Terminals & Liquefaction plants• Town grids	30,000
•RES (Wind, PV, Biomass, Mini Hydro, Geothermal)	55,000
Intraregional Mega Projects <ul style="list-style-type: none">• Oil Pipelines• Gas Interconnectors• Main gas pipelines• Electricity Interconnectors	40,000
•Total	280,000

**Revised IENE figures (September 2013)*





Key Messages

1. Following latest positive developments and final investment decisions on major oil, gas and electricity projects the total investment potential in the region has been revised upwards to 280 billion Euro in the current decade for the 12 country SEE region
2. As several other energy projects are progressing at the same time on thermal power generation, electricity grids, gas interconnectors and town grid expansion, upstream and downstream oil projects, RES and Energy Efficiency an increase of energy related financial turnover is foreseen
3. Consequently we are likely to see strong demand for the financing and for financial services related to small and mid scale energy projects in most countries of the region



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**Thank you for
your attention**

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