

**6<sup>th</sup> S.E. Europe Energy Dialogue**

**Thessaloniki 30-31, May 2012**



**Conference Conclusions  
and  
Main Points**

**Athens, September 2012**

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## Introduction

The challenges, the investment opportunities and the necessary changes at policy and regulatory level, across the whole range of the energy sector, were the focal points of the presentations and discussions at the “6th South East Europe Energy Dialogue” (6th SEED), organized by the Institute of Energy for South East Europe (IENE), in cooperation with the World Energy Council (WEC).

An important observation from this year’s “Energy Dialogue” is the region’s new found dynamism in addressing key energy issues both in terms of policy and regulation but also in the area of project implementation. Electricity market integration at regional level is getting nearer to realization following progress in cross border HV interconnections and the setting up of the regional Coordinated Auctions Office in Podgorica. Oil refining and product marketing is moving ahead with the completion or start up of major projects in Greece, Turkey, Bulgaria and Serbia. Likewise, considerable progress is being reported in offshore exploration in several countries of the region including Romania, Turkey, Bulgaria, Cyprus and Montenegro. The realization of major new natural gas trunk lines is getting closer following developments in Azerbaijan (read latest decisions by the Shah Deniz consortium) but also Gazprom’s resolve to speed up the South Stream project. At the same time the penetration of RES, especially wind and photovoltaics, is spectacular and countries like Romania, Greece, Bulgaria and Turkey are in the forefront of developments.

## Conference Main Points

### A. Energy Policy

- ✓ High oil prices hinder economic growth. That's because, the development of new field needs time to deliver and high investment, while the global demand is increasing.
- ✓ World energy demand will increase by 1/3 in 2035, with natural gas and renewables to gain significant share in the energy mix.
- ✓ Emerging economies will continue to determine the global demand for oil, however, natural gas and renewables will account for 2/3 of world demand in 2035.
- ✓ The three pillars of EU Energy Policy remain security of supply, tackling climate change and integration of Renewable Energy Sources and economic efficiency and realization of the Internal Energy Market.
- ✓ Importance of creating CAO [Coordinated Auctions Office] as manager of the auction for electricity connections. Need to remove existing restrictions on cross-border infrastructure and need to develop a coordinated investment strategy emphasizing on regional criteria for infrastructure development. CAO is expected to provide an efficient and stable ground for regional electricity trading.
- ✓ Importance of integrating the SEE Region into the EU energy market, by means of a direct electricity connection.

## B. Power Sector

- ✓ Nuclear power seems to be one of the most significant alternatives for restoring the supply-demand balance, while nuclear projects will continue to have an increasing importance everywhere, contrary to social reactions.
- ✓ Energy prices will continue to rise, due to both financial bottlenecks seen in Europe and continually rising fuel prices in the Middle East

## C. Oil

- ✓ The region as a whole is an under-explored area (except Egypt & Syria); significant discoveries have opened new plays and further exploration efforts will redefine the future of the region.
- ✓ Commercial exploitation of hydrocarbon accumulations in the Thracian Sea and in analogue systems to the ones of Greece, such as in Italy, Albania, Croatia, as well as discoveries in East Thrace in Turkey, all advocate to high hydrocarbon potential of the similar sedimentary basins of Greece.
- ✓ European refining environment will remain highly challenging in the next few years,
- ✓ Balkan refineries lack complexity and scale and produce too much fuel oil, in a market that will see less and less fuel oil demand.
- ✓ Investing to upgrade all East Mediterranean refineries is not realistic, as only certain projects will be economically viable.

- ✓ In comparison to the rest of Europe, the Med region offers opportunities, given regional demand growth drivers and export potential.

#### D. Renewable Energy Sources

- ✓ The biggest problem renewable energy projects are facing is the difficulty in financing.
- ✓ There are projects of cumulative power of 20 GW with production license that cannot get funding for implementation.
- ✓ Currently in Europe, there is great potential for cogeneration projects until 2020, with a capacity of about 122 GW.
- ✓ The new Directive promoted by the European Parliament on the energy performance attributes, puts great importance on co-production.

#### E. Natural Gas

- ✓ Major regulatory threats to European energy security as follows: a) Termination of the existing long-term supply contracts and/or their replacement with less secure arrangements; b) Disincentives to invest in the trunk export pipelines creating problems with new deliveries and/or diversion from the insecure routes; c) Vanishing flexibility of deliveries at a time of growing demand volatility and d) Threats to the existence of the core market suppliers - the importers - due to rise of 'unfair' competition.
- ✓ Global gas market heads towards extreme tightness and prices will keep rising and force substitution between piped gas and LNG.

- ✓ The industry is responding with record-level project sanctioning, large growth in LNG could potentially weaken pricing in Asia – but not much
- ✓ Europe has been slow to develop new supply sources.
- ✓ Transition to market opening could be supported by allowing competition/access from western hubs, limiting price regulation and cross-subsidies, and making best use of existing regional infrastructure.
- ✓ Best effects of natural gas sector and market development can be achieved through the synergy of regional approach in planning and implementing.

## Conference Overview

More than 45 speakers and panelists participated in this year's event which included seven separate plenary sessions.

At the opening of the 6<sup>th</sup> Energy Dialogue "Redefining SE Europe's Energy Map", Mr. Slav Slavov (Regional Manager for Europe and Central Asia, World Energy Council) and Costis Stambolis (Deputy Chairman and Executive Director of IENE) pointed out the radical changes and reforms already underway and others that are under development that would enable the region to meet new challenges. "A number of significant developments in terms of policy and infrastructure are currently taking place in SE Europe which when completed, by the end of this decade, will have helped reshape the energy landscape of the region. These developments concern both market operation and energy production/ transmission capabilities", said Mr. Stambolis.

At his opening speech, the Chairman of IENE Dr. John Desypris stressed the need for regional consensus on major infrastructure projects. "Policy proposals and good ideas are important," he said, "but equally important are the financial tools necessary to realize the projects." He also noted that the EU policy leans toward stopping subsidies to large projects and identifying new financial tools to finance investments.

The Chairman of IENE added that public funding under the current economic crisis is becoming limited. For this reason, private investments are channeled to well-planned projects, which utilize the synergies between two or more countries and/or sectors, have a sound financial framework and show commercial viability. Thus, he proposed a European cost-benefit analysis that takes into account both the economic and social/environmental dimensions, to make sure that those who will benefit will also be required to pay for specific projects.



The representative of the Turkish – German consortium “Borusan Enbw Energy AS” Mr. Yurdakul Yigitguden stressed that high oil prices hinder economic growth. That's because, as he said, “the development of new field needs time to deliver and high investment, while the global demand is increasing. In addition, global gas demand is growing fast, 1.7 – 2% on a yearly average until 2035 led by China, Middle East and India”. He noted, in fact, that “even traditional exporters of pipe-gas like Canada or Russia seek to become more flexible with LNG investments”. In Europe on the other hand, the debt crisis has the highest priority on the political agenda, and high fuel prices are a big threat to European economies. Greek and Turkish refineries suffer due to the sanctions on Iranian oil and successful hydrocarbon exploration results in the eastern Mediterranean region create new opportunities and threats.

The U.S. attitude toward Iran will be clarified after the U.S. elections in November, said Mr. Marc Seris, Senior Director of PFC Energy. “There won’t be any move by the U.S. at least until the end of the year as this is an election year” he said. However, giving a glimpse of what might follow Mr. Seris noted that the US and EU policy gives Iran little incentive to compromise.

Referring to developments in North Africa and the Middle East, the speaker said that the area is undergoing some potentially highly disruptive political changes and conflicts based not on political differences, but to "outdated" divisions (racial, religious, etc).

The representative of IEA, Mrs. Thea Khitarishvili, predicted that World energy demand will increase by 1/3 in 2035, with natural gas and renewables to gain significant share in the energy mix. She stressed that emerging economies will continue to determine the global demand for oil, however, she estimated that natural gas and renewables will account for 2/3 of world demand in 2035.

The second session of the 6<sup>th</sup> SEED, “Towards a Regional Electricity Market” moderated by Mr. Nenad Stefanovic, Senior Expert on issues of power of the Energy Regulator of Serbia (AERS), discussed the necessary reforms and investments for the development of an integrated regional electricity market in Southeast Europe. Mr. Simon Uzunov, Head of Electricity Unit of the Energy Community Secretariat in Vienna, stressed the progress in the procedures of the energy integration "acquis communautaire" both in the Western Balkan’s regulatory framework and the practice field, while he set the five priorities for the “Energy Strategy 2020” as follows: Achieving an energy-efficient Europe, building a truly pan-European integrated energy market, empowering consumers and achieving the highest level of safety and security, extending Europe’s leadership in energy technology and innovation and strengthening the external dimension of the EU energy market. According to Mr. Uzunov, the three pillars of EU Energy Policy are the security of supply, tackling climate change and integration of Renewable Energy Sources and economic efficiency and realization of the Internal Energy Market.

The Chairman of ADMIE, Dr. George Koutzoukos, pointed out the need to address energy issues at regional and not national level. For this reason, Mr. Koutzoukos stressed the importance of the creation of CAO [Coordinated Auctions Office] as manager of the auction for electricity connections, based in Montenegro, which is currently at the final stage of realization. The Chairman of ADMIE noted the need to remove existing restrictions on cross-border infrastructure and the need to develop a coordinated investment strategy giving emphasis on regional criteria for infrastructure development.

Mr. Serhat Metin, Assistant Manager of the National Dispatching Center of TEIAS in Turkey, referred to the Turkish electricity system, stressing that the installed capacity in the country has reached 63.225 MW, consumption has

increased in 2011 by 9% and demand for electricity is growing by 8-10% annually.

“Bulgaria intends to participate in the CAO” said Ms. Victoria Popovska, Head of Electricity Market Division at the National Dispatching Center ESO, from the podium’s Conference. She referred to the efforts undertaken by Bulgaria for adapting to the new market model and converging with the single energy market, based on the European legislation. She further announced that in late June, a new institutional framework for RES will be put in place in the country, while she concluded by stating that “the Third Energy Package sets strong requirements in respect of market development and market integration. No room for any further delay in undertaking measures by the relevant institutions.”

Investment planning in the electricity sector and opportunities opened in the South Europe region were analyzed by the speakers of the next Session, under the coordination of Mr. Gus Papamichalopoulos, Partner of the KGDI Law Firm.

Ms. Ekaterinaris, Deputy CEO of Greek PPC stressed the importance of new investments in electricity and thermal RES, currently undertaken by the company. She explained that PPC considers multiple alternatives for financing the Ptolemais-5 project and the two large PV projects in Megalopolis and Kozani, amid a difficult economic period.

Speaking on behalf of Prenos AD, counterpart of ADMIE in Montenegro, Mr. Aleksandar Mijuskovic said that on the one hand, the CAO and on the other one the submarine cable project of electrical interconnection of the country with Italy that is expected to be fully operational by 2013 or early 2014, are the two most important developments in the energy sector in the country, and taken together, are the two major factors of upgrading the country in the

energy map of Southeastern Europe. He also stressed the importance of the integration of the SEE Region into the EU energy market, by means of a direct electricity connection, the Montenegrin transmission grid acting as a platform for electricity exchanges between Italy, EU and the SEE Region, and concluded by saying that the CAO located in Montenegro is expected to provide an efficient and stable ground for regional electricity trading.

Mr. Mirsad Sabanovic (Executive Director for Supply and Trading of Electricity of Bosnian JP Elektroprivreda BiH), reported on the problems and challenges that Bosnia-Herzegovina faces and set as main objectives for new capital investments at JP Elektroprivreda BiH, the replacement of existing old units in TPPs with more efficient units and fulfilling of EU obligations in increasing of generation from renewable energy sources.

Professor Osman Sevaioglu, of the Middle East Turkish Technical University, referred to the works out in the field of electricity in his country, as well as the regulatory framework. As he mentioned, it would take \$46 billion for projects in power generation by 2020, while the goal is to reach 60 GW in total capacity by 2020. He emphasized on the annual demand growth rate which is still too high, i.e. 7.5 %, which seems to lead most likely to a serious supply-demand deficiency in 2015. Thus, nuclear power seems to be one of the most significant alternatives for restoring the supply-demand balance, while nuclear projects will continue to have an increasing importance everywhere, contrary to social reactions. He also predicted that energy prices will continue to rise, due to both financial bottlenecks seen in Europe and continually rising fuel prices in the Middle East, and warned that uninterested behavior of USA, China and India in not respecting the Environmental Protocols will eventually lead the societies to a stage that the environmental concerns in energy generation will no longer be of their primary concern

The role of the European system of greenhouse gas emissions was noted by Mr. Pantelis Manis, Head of Marketing to Issuers Department, Thessaloniki Stock Exchange Center. He stressed that this year, the revenues from auctioning 2 million emissions allowances [EUAs] in Greece, amounted to €13.3 million, which, as he noted, shows the prospects of the procedure.

At the next session, “Oil Market Opportunities in SE Europe”, Mr. Hans Hutta, General Manager of the Petroleum Management Academy in Vienna, presented the outlook for new hydrocarbon discoveries in the Black Sea, stressing that it is a largely unexplored area.

Mr. Costis Economopoulos, petroleum geologist and IENE associate, continued with a detailed presentation of the efforts undertaken in each country of the SE Europe’s region in oil and gas, providing figures on production, stocks, etc. He stressed that the region as a whole is an under-explored area (except Egypt & Syria), that significant discoveries have opened new ground and further exploration efforts will redefine the future of the region.

Dr. Constantinos Nikolaou, Petroleum Geologist and General Director of Kanergy, addressed the critical questions associated with the issue of hydrocarbon investigations in Greece. He pointed that the answer to the question whether or not Greece has any exploration and production potential for H/C, is definitely positive. This is because there are proven and active petroleum systems in the alpine and Post-alpine basins of Western Greece, as well as, in the molassic and post-alpine tertiary basins of Eastern Greece, where source rocks, reservoirs, cap rocks, traps and proper geological and migration time co-exist. The active hydrocarbon seeps and shows and hydrocarbon discoveries, found in both Western and Eastern Greece, attest to the existence of active hydrocarbon systems. Commercial exploitation of hydrocarbon accumulations in the Thracian Sea and in analogue systems to

the ones of Greece, such as in Italy, Albania, Croatia, as well as discoveries in East Thrace in Turkey, all advocate to high hydrocarbon potential of the similar sedimentary basins of Greece.

The crucial question is whether there are proven or possible petroleum systems in Greece, and the answer is that in some areas active systems exist, but more work is needed for safe conclusions. Also, there are similar examples in neighboring regions such as Eastern Thrace, Italy and Albania, which support the likelihood of recoverable quantities at the western Greece basins.

Mr. Panos Benos, Chief Financial Officer of “Energean Oil & Gas”, talked about the company’s €150 million investment program already implemented, aiming at increasing production. He also referred to the “Open Door process” currently taking place in three areas of the country, discussing chances of success and costs for each case. He stressed that despite the difficulties, investment opportunities in Greece for oil companies, exist.

Mr. Mark Seris, Senior Director of PFC Energy talked about international trends in production and refining of oil, with emphasis on U.S., Russia, the Balkans and the Black Sea. European refining environment will remain highly challenging in the next few years, while he stressed that East Mediterenean refining projects are unlikely to all go ahead. He noted that Balkan refineries lack complexity and scale and produce too much fuel oil, in a market that will see less and less fuel oil demand. Thus, he concluded that investing to upgrade all East Mediterrenean refineries is not realistic, as only a few projects will be economically viable.

Mr. Zahariadis, Hellenic Petroleum’s Thessaloniki Refinery Operations Director, referred to the refinery market in the Southeastern Europe. He said that sales for the company in 2011 were €9.3 billion and emphasized that the company’s target is to double EBITDA through its new investment program.

According to Mr. Zahariadis, in comparison to the rest of Europe, the Med region offers opportunities, given regional demand growth drivers and export potential, while the implementation of a €3 billion investment programme combined with major transformation initiatives will enhance Hellenic Petroleum's competitiveness and substantially increase profitability in the next two years.

"Reaching the target for RES by 2020 is impossible for Greece", said the Executive Director of Protergia S.A., at Mytilineos Company Group Dinos Benrubi, while he also stated that "feed-in tariffs in photovoltaics are not viable".

"No one invests, there is no credibility or trust, no one is sure if there will still be, if they will get paid", said Mr. Benrubi. "It doesn't matter if they are lower, provided they are getting paid," he added. Especially in solar panels, he said, the tariffs are unsustainable.

Mr. Benrubli said that the program "Helios" won't be materialized. He also said that Mytilinaios group currently runs 1.2 GW of thermal units and 54 MW of RES in power. 1.4 GW of renewables is currently in the phase of licensing. The group's target is to have a total production of 400 MW in operation by 2015 [mainly wind power], that would account for 10-15% of total production in Greece.

The vice president of Vestas Hellas, Mr. Yanos Michopoulos, noted that the biggest problem renewable energy projects are facing is the difficulty in financing. There are projects of cumulative power of 20 GW with production license that cannot get funding for implementation.

The president of the Hellenic Association for the Cogeneration of Heat and Power Mr. Costas Theofylaktos, talked about the role of cogeneration as a key pillar for saving primary energy. He said that currently in Europe, there is great

potential for cogeneration projects until 2020, with a capacity of about 122 GW. The new Directive promoted by the European Parliament on the energy performance attributes, puts great importance on co-production. The Association has the goal of promoting micro cogeneration to 50 KV, for the tertiary and residential sectors. According to Mr. Theofylaktos, some related works have already started (residential, sports centers, hotels).

Mr. Sergei Komlev, Head of Directorate of Gazprom Export, a subsidiary of Russian state gas giant Gazprom, elaborated on Gazprom's strategy on energy security of the EU, highlighting the most important and topical issues relating to gas supply to Europe. Mr. Komlev identified the major regulatory threats to European energy security as follows: a] Termination of the existing long-term supply contracts and/or their displacement with the less secure arrangements; b] Disincentives to invest in the trunk export pipelines creating problems with new deliveries and/or diversion from the insecure routes; c] Vanishing flexibility of deliveries at a time of growing demand volatility and d] Threats to the existence of the core market suppliers - the importers - due to the 'unfair' competition enhancement.

Mr. Komlev said that currently there is great pressure on the long-term gas supply contracts with a "take or pay" term for European markets. He made a reference on "smart reforms" without giving any other details.

Konstantinos Karayannakos, Division Head of International Operations of DEPA was the next speaker of this session which was dedicated to "Natural Gas and European Energy Security: The supply Concerns". He analyzed the company's strategy within the European strategy for the "Southern Corridor" and cross-border projects with Greece's surrounding countries. He stressed that the ITGI System which comprises IGB and IGI, is a powerful combination which provides for the needs of South Eastern Europe, while he added that a



pipeline from East Med will create strong synergies with the ITGI system and will connect East Med to the European grid.

Narsi Ghorban, Secretary to the Environment and Energy Commission of the International Chamber of Commerce, Iran Committee, expressed estimates for both the future of Iran's gas production, and the prospects of Tehran's relations with the West in this area.

Estimates on developments in European security of Gas made by Nikos Tsafos (Senior Manager, Global Gas and North American Onshore PFC Energy, Washington DC, USA) and Klaus Luber (Head of Business Development, E.ON Ruhrgas AG, Germany) were of particular interest, at a time when the EU strategy for the "Southern Corridor" enters the final stages of implementation. Mr. Tsafos said that the global gas market headed towards extreme tightness and prices will keep rising and force substitution between piped gas and LNG. He pointed that the industry is responding with record-level project sanctioning, that large growth in LNG could potentially weaken pricing in Asia – but not much and concluded that Europe has been slow to develop new supply sources. Mr. Luber said that transition to market opening could be supported by allowing competition/access from western hubs, limiting price regulation and cross-subsidies, and making best use of existing regional infrastructure.

The session was moderated by the Athens University Professor Dimitris Mavrakis and Slav Slavov, Regional Coordinator for Europe and Central Asia, World Energy Council.

The discussion on the development of gas market in southeast Europe during the Roundtable discussion that followed, chaired by Dr. Narsi Ghorban was of extreme importance. During its course, the participants Mr. Sergei L. Komlev, Vladimir Durovic (Manager, Development Division Department, Plinacro Ltd),

Nick Tsafos, Rosen Simitchiev (Senior Adviser of the Bulgarian Bulgartransgaz), Dr. Michael Thomadakis (RAE member) and Gokhan Yardim (General Director of Turkish Anoragaz Import Export Wholesale Inc.) had the opportunity to confront their views on the multitude of issues that arise in this area, but also to diagnose synergies and cooperation opportunities.

The major gas infrastructure projects in SE Europe were at the center of the second session, coordinated by Dr. John Dessypris, President of IENE and Director of Regulatory Affairs Mytilineos S.A. Keynote address was delivered by Dr. George Paparsenos, Managing Director of DESDA, who referred extensively to the strategic development and expansion of the gas network in Greece. Mr. Paparsenos concluded that the coupling of the expanded Revythousa LNG terminal with the interconnection projects creates the conditions for establishing a gas hub in Greece for the SE Europe. He added that this is enhanced by the possibilities of reverse or virtual reverse flow of the interconnected networks, especially the Italian ones. Due to the geographical position of Greece between eastern sources of gas and the ones in North Africa, in the near future, the Greek Network will be even more developed into a major corridor to Europe for new gas sources.

Ms. Boyana Dimitrova-Achovski, Head of International Partnerships Manager of the gas network in Bulgaria, Bulgartransgaz, referred to the strategy of cross-border interconnections, and the prospects for Bulgaria as a key transit country for gas pipeline projects in Europe (Nabucco, South Stream, etc.).

Mr. Rikard Scoufias (Country Manager for Greece, TAP), Mr. Constantine Karayannakos (DEPA) and the Italian executive of Edison Spa, Mr. Fabio Santambrogio, analyzed their groups views on the strategy for the "Southern Corridor " and the candidates for this project. Mr. Santambrogio analyzed the ITGI System, comprising IGI and IGB pipelines, which is designed as a multi-

source project to import up to 20 bcm/y of gas from East Med, Caspian and/or Middle East, while the ITGI system is designed as a multi-destination project allowing for natural gas to reach both Western Europe (through IGI) and South East Europe [through IGB].

Mr. Milan Zdravkovic (Senior Development Director of the Serbian JP Srbijagas) and Mr. Vladimir Durovic (Manager, Development Division Department, Croatian Plinacro Ltd.) reported on the prospects opened up in this context for Serbia and Croatia respectively.

Mr. Zdravkovic explained that individual energy markets in the region are relatively small, which results in commercial unprofitable character of interconnection projects. He added that missing interconnection infrastructure is a basic precondition for the regional natural gas market implementation, while aspects of security of supply for the Region and criteria of diversified routes and sources of supply spread the responsibility and interest for implementation beyond the limited capability of local TSOs.

Mr. Durovic pointed out that the fact that each country of the Southeast Europe focuses on some particular supply project which it considers most interesting is obvious and understandable. He concluded that the best effects of natural gas sector and market development can be achieved through the synergy of regional approach in planning and implementing.

The challenges associated with the prospect of creating a regional energy market in Southeastern Europe was at the center of the seventh and last session of the 6th South East Europe Energy Dialogue, with Mr. Nenad Stefanovic, Senior Expert on issues of electricity regulator Energy of Serbia (AERS) as keynote speaker. In this session participants included Mr. Rosen Simitchiev, Senior Adviser of the Bulgarian Bulgartransgaz, Dr. Michael

Thomadakis of RAE, and Panayiotis Kanellopoulos (Managing Director, of Greek M & M Gas Co. SA).

The session was followed by a roundtable discussion, chaired by Vice President and General Manager of IENE, Costas Stambolis, dedicated to SE Europe's Energy Market Future Outlook. The discussion was attended by Mr. Slav Slavov (World Energy Council), Yurdakul Yigitguden (the Turkish-German consortium Borusan Enbw Energy AS), Simon Uzunov (Head of the Department of Electrical Energy Community Secretariat), Milan Zdravkovic (Serbian JP Srbijagas), Panagiotis Kanellopoulos (M & M Gas Co. SA) and Constantine Papamichalopoulos, Partner of law firm KGDI.

The proceedings of the 6th South East Europe Energy Dialogue (6th SEED) wrapped-up with the formulation of the main conclusions of this year's Conference, with the finding, once again, that this international event has now established itself as the leading regional dialogue on the issues covering the entire Energy agenda of the South Eastern Europe.