



“9th S.E. Europe Energy Dialogue”

Thessaloniki 29 – 30, June 2016

Conference Conclusions

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➤ *Background*

The SE Europe Energy Dialogue, convened by the Institute of Energy for SE Europe (IENE), for the 9th year running, in Thessaloniki on June 29-30, proved once again a highly rewarding event and one of the highlights of the current regional energy agenda. This year's intense two-day Energy Dialogue event attracted more than 75 delegates from 20 different countries from the region and beyond.

Among the key regional companies which were represented in this year's Energy Dialogue were Serbia's NIS, Srbijagas, AERS, SEEPEX, Croatia's Plinacro, Bulgaria's ESO EAD, Romania's Transgaz, Turkey's Turkerler and EPIAS, Iran's NIGEC, the "Cyprus Natural Hydrocarbons Company Ltd.", Norway's DNV, Greece's Public Power Corporation (PPC) and Public Gas Corporation (DEPA), Hellenic Petroleum SA, EPA Attika, Mytilineos Holdings S.A., EnSCO SA, KG Law Firm, Energean Oil & Gas Company, Intelen, as well as senior experts from international think tanks and companies such as Columbia's Center on Global Energy Policy, UK's Energy Exemplar, US' Enalytica, and others.

There was also considerable participation by senior officials from major international organizations - including the International Energy Agency (IEA), the European Commission, the Energy Charter, the Organization for Security and Co-operation in Europe (OSCE) and the Coordinated Auction Office of South East Europe, (SEE CAO).

Some 45 presentations and interventions were contributed in this year's Energy Dialogue while lively discussions took place in various well organized panels. The special theme of this year's meeting was the '**Quest for a New Energy Balance**', signifying the rebalancing now taking place in the global and regional energy markets. The subjects covered in the 2016 Thessaloniki 'Energy Dialogue' ranged from the efforts now under way to establish EU's all-encompassing Energy Union and the impact of this huge undertaking at regional level, to the pressing energy security issues especially evident in the eastern and south eastern periphery of the region. The fast changing electricity markets in several countries of the region including Turkey, Greece, Romania, Bulgaria, Serbia and Croatia was the subject of intense deliberations as well as the efforts now in progress to create a more liquid and unified regional gas market. The role of major oil and gas suppliers to the

region's energy markets was also analyzed with useful contributions by Russian and Iranian experts.

The further development of Renewable Energy Sources (RES) and their increasing penetration in the region's energy mix together with progress made in energy efficiency applications was another area of interest which was hotly debated during the two day 'Energy Dialogue' gathering. Also the various oil and gas exploration programmes in the different countries of the SE European region, with emphasis in the Adriatic and the Eastern Mediterranean, attracted considerable interest.

Furthermore, the preliminary findings of "SE Europe Energy Outlook 2016", a major reference study undertaken by IENE, were presented for the first time during the conference.

➤ Conclusions

International and Regional Developments

This year's SE Europe Energy Dialogue gathering was highly topical given EU's major drive, since late 2015, in establishing an Energy Union and the emphasis on energy security in view of persisting regional instability (e.g. Syria conflict, Libya's unrest, mounting refugee crisis, Ukraine territorial issues etc.). Europe's high dependence on hydrocarbon imports, the current volatile energy pricing environment, Iran's return to European markets, the global concern for the development of viable alternatives and the need to promote further carbon free solutions emerged as key policy issues. The Dialogue also focused on the latest developments in the region's evolving natural gas, electricity and RES markets and S.E. European countries' ongoing energy partnerships with Russia, the Caspian Sea, the Persian Gulf, the East Mediterranean and North Africa.

Over the last two years, certain fundamental shifts in the global energy scene took place, most noticeably in the oil and gas markets. In the oil markets, an oil glut building up progressively since August/September 2014 culminating at times in excess supply over demand as high as 2.5-3.0 mb/d. The prevailing explanation being the spectacular rise in USA and Canadian oil and gas production, thanks to shale oil and shale gas, which has enabled both countries to increase oil production by 5.0 mb/d for USA and 1.3 mb/d for Canada. The immediate impact being the lessening of demand for crude oil imports in North America and hence the increase of inventories and oil storage at sea.

At the same time the decision by Saudi Arabia and some of its allies in OPEC to defend their market share, rather than an upper price zone, by refusing to lower their production (see OPEC's historic meeting of November 2014 in Vienna) intensified friction between producers and led to a collapse in the price of oil which by early 2016 had retreated by almost 70% compared to June 2014. This huge price adjustment, as was expected, affected negatively the prices of gas which in their turn impacted electricity wholesale prices.

The rebalancing which now takes place in the global energy market is not just limited to quantitative realignments of produced and consumed oil and gas volumes but involves a much broader perspective. This is to be found in the equally impressive rise of RES and their determined entry into the energy mix of several

countries, with RES not just competing with coal and lignite- the energy currency of SE Europe- but on several occasions displacing gas. With the gas market itself in search of a new balance as global demand is slowing, as the latest IEA data reveals, and with LNG coming out strongly to compete with piped gas, thus increasing its share in global gas supplies. Obviously the new price regime, roughly at 50% of the value of the previous period 2010-2014, is the visible external trace of what is actually happening, where market dynamics follow their own intricate rules not easily discernible to the untrained eye.

As far as the SE European region is concerned the new energy price regime is helping (a) gas markets to consolidate or even expand their position in the energy mix, (b) electricity markets to complete their arduous path towards liberalization and competition, (c) RES to adjust to a more pragmatic market environment and break their disastrous dependency on subsidized tariffs, (d) oil and gas exploration to proceed by focusing on the exploitation of really commercially viable deposits.

Far from being settled or in state of delicate balance energy markets in SE Europe are vibrant while offering plenty of opportunity for further development and rewarding investment. The global rebalancing now taking place in the energy markets will eventually work in favour of the regional energy market.

The emphasis now placed on energy security by Europe's nascent Energy Union has one of its priorities the provision of secure, affordable and climate-friendly energy for all EU countries. It is stated that "Wiser energy use while fighting Climate Change is both a spur for new jobs and growth and an investment in Europe's future".

Thus, renewables and natural gas are bound to become the main energy sources during the 21st century, while electricity and natural gas systems will act as the main energy carriers, towards zero or low CO2 emissions. Further expansion of their use and their dominant position during the 21st century should be expected. Both of these energy sources are considered critical to infrastructures for the economy and our modern technology oriented society and consequently, the security of energy supply is of high priority.

In SE Europe, the natural gas market is characterized by poor, or even lacking the appropriate infrastructures. At SEEED it was generally agreed that the penetration rate of natural gas in the region is much lower compared to other European

regions, due to SE Europe's infrastructure deficit. Therefore, an expansion of gas infrastructures, including cross border interconnectors, storage and LNG facilities, with a parallel diversification of suppliers is deemed necessary in meeting increased market demands.

Significant amounts of natural gas, with supplies coming mainly through imports, are used for power generation, in parallel with high penetration of renewables. The advanced technologies used and the high efficiency of gas for power generation are also very attractive for investors. Moreover, new gas uses in transport and shipping should be considered.

As we are moving towards a more interconnected Europe and a single European energy market more and stronger cross border electricity transmission lines are needed in the region for the balancing of power generation and demand and for market operation. Hence, the vision for clean electricity is largely based on the high penetration of renewables for power generation. As it became evident from the data presented in the 9th SEED, our region has a great potential of renewables and their penetration progressively into the electricity networks is a big challenge. New concepts and innovative technologies should therefore be introduced in electricity networks over the coming years in order to integrate and manage the anticipated high penetration of renewables.

Electricity

In SE Europe, the electricity market liberalization has faced several difficulties and numerous non-technical obstacles in the past as the incumbent companies in almost all countries solidly resisted any change on the grounds of losing control of the market and hence weakening of their bureaucratic hold. Currently, the situation in EU member countries of SE Europe and Turkey looks very different with certain countries having managed to complete what appeared to be an anomalous transition period.

In the case of Turkey, electricity market operation unbundling and competition in the retail area has entered a critical stage with the market opening up much faster than anticipated. In the case of Western Balkans, the intervention of the Energy Community through the contracting parties was crucial and facilitated the overall transition process to European Acquis. Hence, some solid steps have been made towards electricity market competition. However, progress is not very satisfactory

in most contracting parties, largely because of the inflexible market structure and the persisting stiff hold of the state over market mechanisms.

Electricity demand across SE Europe is extremely varied and reflects population characteristics, GDP structure and commercial industrial activities. The power generation portfolio in SE Europe (excluding Turkey) is dominated by coal and hydropower, generating 47% and 48% of electricity respectively. RES deployment (excluding large and small hydropower) is at a relatively early stage in the region, generating less than 4% of the electricity (2013).

The region's relative reliance on nuclear power is unlikely to diminish over the next decade. Neither Bulgaria nor Romania are likely to shut down their power plants as they are aware that they cannot replace nuclear capacity that easily. In addition, Turkey has now embarked on an ambitious nuclear power generation programme with two major complexes under construction. According to stated plans, the addition of some 11 GW of new nuclear capacity is projected by 2025 - 2030 in the region (with 9 GW coming from Turkey).

Lignite and coal will continue to contribute substantially to power generation in SE Europe for the foreseeable future, but with decreasing trends in the long term. However, over the next ten years, the share of solid fuels is anticipated to steadily increase in some countries of the region in order to meet increasing demand at competitive prices (eg. Turkey and Greece).

Oil

The currently prevailing lower oil prices can only be beneficial for the group of countries comprising SE Europe as the region as a whole is a net oil importer. With oil trading on average at around \$45-\$50 a barrel, over the last two years SE Europe has seen a cumulative reduction of \$29 bn in its annual oil import bill with major importers such as Turkey and Greece benefiting most. A substantial portion of these saved costs gradually fed into consumer pockets, who although they have decided to retain most of them, they still diverted some funds towards spending. This has helped sustain and even strengthen the anaemic economic growth observed lately in most SE European countries, with the exception of Greece whose economy is now set for yet another contraction of approximately 0.5%-1.0% of GDP for 2016.

In conclusion lower international oil prices are clearly benefiting the economies of the region, greatly contributing to public deficit reduction, but not to the extent that they affect drastically other key economic indicators, since consumer oil prices entail a very high degree of taxes. In most countries in the region, government taxes range between 55-65% of the pump price. So the much reduced international oil prices only affect a small segment of the final price.

As far as the upstream sector is concerned huge tracts in most countries of the region remain unexplored from a hydrocarbon resource view point. The need to increase indigenous oil and gas output and explore for new deposits, becomes all apparent together with the need to diversify energy resources by broadening the energy mix.

The need for large scale exploration of SE Europe's oil and gas deposits backed by the latest positive developments in the East Mediterranean hydrocarbon sector is forcing governments to rethink their energy strategies. It is widely accepted that the region as a whole is under-explored while latest significant discoveries (Cyprus, Israel, Romania, Egypt) have opened new plays with further exploration efforts needed to redefine the future of the region. However, there are vast differences between the countries of SE Europe in terms of their reserves, their commercial viability as well as how their exploration and exploitation will take place.

With regard to oil infrastructure, there have not been any spectacular changes over the last three years. No significant additional storage capacity or new oil terminals have been added. By necessity the existing regional oil network infrastructure remains limited. Storage capacities in West Balkans amount to 8.8 mcm. Most of them are in use by refineries for their daily operations. The existing storage capacity is a long way short of the additional 12.5 mcm required to comply with EU's Directive 2009/119/EC. The oil markets in the Contracting Parties of the Energy Community (i.e. West Balkans) are relatively open. Suppliers can enter freely the market and gain access to networks and storage facilities. Greece and Turkey which between them dominate the region's refinery operations are reporting high throughput runs backed by profitable margins while Turkey is moving ahead with the construction of additional refinery capacity.

Natural Gas

During the past five years some major moves regarding the further development of the natural gas market in SE Europe have taken place. A series of events have led to the radical change of the circumstances and outlook of the gas market in SEE, in a way that even though no material results are yet visible, they certainly mark a new era and, to some extent, will affect gas market evolution in the rest of the EU.

The most important of these ground breaking gas developments in the region was the decision by the consortium for the development of the Shah Deniz II field in Azerbaijan to go ahead with its commercial exploitation and almost at the same time select, in June 2013, the Trans-Adriatic-Pipeline (TAP) as the preferred option for shipping the gas to Europe, signaling the end of a long selection process and the initiation for the realization of the Southern Gas Corridor.

However, there is still a highly fragmented landscape for gas markets in the SEE region, with effectively no cross-border trading, and hence exceedingly difficult to support the development of competition based on a liquid market. Therefore, it is not surprising that gas trading hubs are either nonexistent in the majority of the countries, or even where they exist (Slovenia and Romania) their liquidity is extremely low. In this environment it is too difficult to imagine how the pan-European vision of a Gas Target Model would be implemented within a reasonable time frame.

The only way forward for the appropriate development of the regional gas market is the consistent and rapid implementation of the provisions of the Third Energy Package, at least to the extent that the countries have committed to implement it in a legally binding way, i.e. the EU Member States and the Energy Community Contracting Parties.

In this sense, it is expected that the South Corridor will play a pivotal role as an alternative entry gate for gas which will help Europe strengthen its energy security by diversifying both its energy supplies and its energy routes. Meanwhile, several gas exploration projects are in the development stage in the East Mediterranean region with important new gas discoveries such as the Leviathan and Tamar fields in Israel, Zohr in Egypt and Aphrodite (which borders with Zohr) in Cyprus' EEZ.

A number of alternative plans are currently under discussion for channeling this gas to Turkey, for local consumption, but also to Europe proper for transit to the continent's main gas markets. These plans include gas pipelines, liquefaction plants for LNG export and FSRU terminals to be tied up into the TANAP-TAP system. The now defunct South Stream and its possible successor the Turkish Stream, should also be considered as a potentially vital gas supply route. Furthermore, the Turkish Stream pipeline raises the prospect for the stalled ITGI natural gas pipeline being revived. It is important to note that ITGI (Greece-Italy Gas Interconnector) has also been included in the European Commission's latest PCI list although it is not as yet linked to any particular gas supplier. Russia's latest proposal for natural gas supply to Europe via the Greek-Turkish border could easily incorporate ITGI into its plan.

Alongside the East-West route, now comes the Vertical Corridor, which is a gas system that will facilitate the connection between existing national gas grids and other gas infrastructure in the East Balkans in order to secure easy gas transiting, thus further contributing to energy security and market liquidity. Such a gas system (which will bring together national grids, underground gas storage facilities, interconnectors, LNG terminals) will form an important new corridor from South to North whose operation will be fully aligned with EU Directives and European energy policy.

Gas will continue to gain share in the energy mix, at least over the next 15 years in Europe and in the SEE region in particular, substituting old and inefficient lignite and coal units, mainly because of its environmental friendly characteristics and increased availability, the higher demand for gas-fired electricity and the expected socio-economic development. However, gas will have to compete with RES (especially during the summer period).

Decarbonization and RES

As far as decarbonization is concerned, the energy transition is underway, but not on track and governments need to ring-fence policies against market swings. The average share of renewables in gross final energy consumption in the region is projected to gradually increase over the next few years, reaching levels of almost

30% by 2050 clearly demonstrating the upward trend, now visible, in renewable energy penetration.

In the case of SE Europe, economic development, until now largely based on the utilization of indigenous lignite/coal resources, will have to be reconciled with COP 21 commitments. Therefore, the planning of clean-cut and compatible long-term energy and economic strategies becomes a real challenge. The main question arising for the countries in SEE region is whether they are ready and willing to substitute coal with other energy forms, taking also into account the existing bias for the use of coal (read lignite) in the region. SE Europe as a whole is a carbon-intensive region, with the exception of Albania whose energy sector is remarkably low carbon, as its system relies almost fully on hydropower for electricity generation. In the case of West Balkan countries, the goal will be to diversify their coal and hydropower-dependent energy mix without increasing CO₂ emissions, while taking into account adequate measures to preserve biodiversity. As far as the rest of the countries in SE Europe are concerned, which are rich in coal deposits, the challenge will be how to progressively diversify their energy mix by minimizing coal use in power generation. A lot more analytical and assessment work (eg. examine CCS/CCU options) needs to be undertaken before introducing realistic regional policies for decarbonisation.

The undoubtedly high potential of RES in SE Europe, such as solar, wind, hydro, biomass, and geothermal still remains largely unexploited by many countries. In the West Balkans in particular, RES use with the exception of hydro is exceedingly low, but in other countries, such as Romania, Bulgaria, Greece and Turkey, RES have made solid advances over the last 10 years. A significant potential for both wind and solar energy has been identified and capacities are expected to increase in future. It is worth mentioning that RES applications will continue their upward trend from 2017 onwards with emphasis on wind and biomass and rooftop PV.

The region is characterized by distinctly different (in terms of structure and operation) and frequently segregated electricity markets. Hence, there are great difficulties in advocating common RES strategies, most of which are linked to smooth electricity market operation.

The 9th SE European Energy Dialogue at a glance

Once again the proceedings of the SEEED highlighted SE Europe's unique position as a vital east-west and south to north bridge for energy flows and its role in the buildup of major energy networks. The establishment of an active energy dialogue and the fostering of regional co-operation are areas where the IENE can add value and play a catalytic role. Today, the IENE is well placed to raise awareness and disseminate experiences on energy issues and related topics (such as environmental issues, good governance, etc). Consequently, the IENE by organizing the "SE Europe Energy Dialogue" aspires to contribute to a high level discussion on the region's key energy issues but also act as a facilitator for much needed co-operation between suppliers and consumers and thus promote the role of SE Europe as an East-West, North-South energy bridge. The proceedings of the 9th South East Europe Energy Dialogue (9th SEEED) now wrapped-up with the formulation of its main conclusions will help further in promoting an active dialogue covering the entire energy agenda of South Eastern Europe.