

Conclusions of the 20th National Conference “Energy & Development 2015”

The established annual National Energy Conference “Energy & Development 2015” organized by the Institute of Energy for SE Europe took place on 11th and 12th November 2015 under the title “The Role of Energy in Revitalising Greece’s Economy”. IENE’s National “Energy & Development” Energy Conference which has been running for 20 continuous years (it began in 1996 by Costis Stambolis and preceded the establishment of IENE) has today become an institution since it has been organised unflinchingly from 1996 to this day with the participation of top representatives from Greece’s political and economic life, renowned Greek and foreign experts and distinguished personalities from the global energy field who contribute to the comprehensive dialogue and promote a fertile discussion on all that is happening in the dynamic energy sector.

The 20th “Energy and Development 2015” National Conference covered a broad range of issues in the energy and environment sectors and, at the same time, highlighted the need for the formulation of specific policies that must be implemented in order to contribute to a comprehensive deregulation of the energy market and a more balanced energy mix. On the other hand, the realisation of an ambitious programme for hydrocarbon exploration and the completion of major energy infrastructure projects are vitally important for the creation of the appropriate climate for investors and the revitalisation of the Greek economy.

The “Energy and Development 2015” Conference was completed with great success and the participation of over 300 participants while during the 2-day event over 50 speakers from Greece and abroad presented the dynamic and prospects of the energy sector domestically and on the international scene. They also highlighted its potential to adapt to the new conditions of the Greek economy under the shadow of the critical financial conjuncture it is experiencing.

The presence of the current government and specifically of the Deputy Minister of Foreign Affairs, Mr Dimitris Mardas and Mr Nikos Kaimakis, special counsellor and representative of the Minister for the Environment and Energy Mr Panos Skourletis, but also of representatives from the opposition, Mr Evangelos Basiakos from ND and Ioannis Maniatis from Dimokratiki Simparataxi, offered the political stigma on the country’s energy future. There was also participation and representation from all the large companies and organisations of the country’s energy sector, i.e. key market players who offered a rounded overview of energy affairs and offered in-depth analysis of the processes taking place and being planned and the challenges to the energy sector. Moreover, the participation of a satisfactory number of invited speakers from abroad, from SE Europe, Turkey, Iran but also from European organisations including representatives from the European Commission, EREF, Eurogas, and the Oxford Institute helped present current developments at international and European level.

European and Regional Developments

In relation to European developments and the trends being formulated in SE Europe, particular attention was focused on the issue of energy dependence on third countries and the strategies that must be adopted by European states in order to achieve a true energy union. During the conference the importance of Energy Union was strongly emphasised since it is expected to increase the EU’s robustness against energy crises and will reduce its great dependence on specific external producers which is particularly important for small markets like those of SE European countries which are currently largely dependent on gas imports from Russia for their domestic needs.

The European Union’s energy policy is contained in the basic triptych “affordable prices-supply security-CO₂ emission reduction”. At the same time, at international level – in view of the international agreement in Paris on climate change – ambitious targets are being brought into force

for the reduction of greenhouse gas emissions while the importance of a final agreement which will be binding for all was also highlighted. Such an international environment poses great challenges for the future of energy world-wide but also in the SE Europe region.

Another major issue that concerned the conference were low oil prices that are affecting the international scene and SE Europe in numerous ways. The important decline in international prices of oil affects not only hydrocarbon exploration activities many of which have been postponed or cancelled but it is thought that combined with the economic recession it could have adverse effects on the smooth growth of the Renewable Energy Sources (RES) market. However, for the countries of SE Europe which are mainly and largely dependent of oil imports it seems that the decline in prices will probably have positive consequences on their energy balance and budgets.

A particular stigma for the SE Europe and Eastern Mediterranean region was offered by the discussion around the large energy projects (natural gas pipelines, interconnecting pipelines, nuclear stations), and the discovery of the massive Zohr deposit in Egypt that significantly changed conditions in the region. Particular mention was also made to Turkey's role in the region as well as Iran's role with Europe and the new situation that will be established once trade relations between Teheran and European markets in the oil sector have been restored.

National Strategy for Energy

The particularities, main characteristics and multiple problems faced by the Greek energy market were at the epicentre of the 20th National Energy Conference and ways were suggested for a convocation with European reality and the adaptation of the current technical model towards a more economic and stable growth model. It was made particularly clear that Greece's energy strategy currently being formulated by the new political leadership must be extrovert, harmonised with the European orientation, exploit its geopolitical position through regional partnerships, in absolute support for global priorities for fighting climate change and reducing energy poverty particularly after the serious economic and banking difficulties faced by Greece over the past 12 months.

It is however important to emphasize that, despite the significant shrinkage of Greece's GDP over the last 5-6 years and the subsequent decrease in energy consumption there was an expansion of the energy sector; this is an indisputable fact as seen in the basic figures presented at the conference and is due to the long-term horizon of energy projects. During this period, 2009-2014, there were increased investments worth around EUR 15 billion in total, i.e. almost EUR 2.5 billion/year, despite the fact that petroleum product consumption decreased by 35% over the past 8 years, electricity consumption by 16%, as did natural gas consumption.

According to the facts presented by the government representatives at the conference, the government is committed to agreeing with the EU's energy framework in defining its energy policy while an important role in its priorities will be the promotion of RES, the new framework for which is currently being studied, as well as the further penetration of natural gas. In relation to the natural gas market, an increasingly important role is expected to be played by LNG which is expected to gain increased importance throughout Europe.

Electricity

One of the conference's main conclusions in relation to electricity was that 2016 will be a landmark year in relation to the adaptation of Greece's electricity market to the target model, within the EU's target for a single electricity market. For the Greek electricity market, it was anticipated that there will be a long haul with 2020 as the ultimate target for the transformation of the market within the

framework of EU targets while bold political decisions and a new regulatory framework are necessary for the correction of continuing and structural distortions in the electricity market. All speakers agreed that there must be important reforms in a very short period of time; the immediate adaptation to the target model is necessary otherwise there will be serious problems.

The issue of the use of lignite for electricity production was also central to the Conference's discussions; many participants shared the view that the depreciation of lignite production will have numerous adverse results for the Greek electricity market. If one of the main aims is for electricity to remain at low prices over the next two decades, the percentage of the lignite' participation in electricity production must be at least around the 35% mark.

Another basic conclusion of the conference was that the deregulation of the electricity market in Greece is still quite far off the mark in terms of competitiveness. Sixteen years after the legislative deregulation of the market, PPC maintains its essentially exclusive access and exploitation of lignite and hydroelectric, while it controls over 70% of Electricity Infusion (Production & Imports) into the network and 94% of Electricity Supply. This is not due to a lack of private investments or the lack of a competitive environment. As long as there is no legal/practical possibility for any other company to have access to all possible sources it will not be able to decide on the composition of its portfolio of production units and energy for itself based on the relevant risk assessments.

Another issue which was highlighted at this year's conference and is of intrinsic importance in the domestic electricity market is the so-called "missing money problem" which relates to the lack of collection of revenues from the participants for the service they provide. The appearance of this problem creates further side-effects such as the difficulty in sourcing capital since it reduces the credibility of companies when they wish to resort to borrowing. Another side-effect is disinvestment risk (closing of units) while there are also negative repercussions on supply security. In the case of Greece this particular problem is manifest as follows: today's system does not pay natural gas units for the flexible services they provide while, at the same time, since 2015 – when Available Capacity Certificates (ADI) were abolished – no power rewards are anticipated for electricity market participants. As supported by numerous speakers the resolution of the missing money problem in Greece must be directed towards three possible solutions:

- The existence of more than one vertical production and supply company of appropriate size and adequate electricity production mix differentiation
- Expansion of market beyond national borders – market coupling and co-ordinated dispatching
- Creation of a reimbursement and power mechanism for flexibility (only units that offer adequate flexibility) and possibly auxiliary power.

Beyond these solutions a number of other measures such as NOME, the confinement of PPC to retail, the sale of lignite and hydroelectric units, the so-called small PPC, the Available Capacity Certificates (ACC) for flexibility, competitions for power compensation with reliability options, etc. were suggested; however alone they do not offer an appropriately applicable solution and could only be described as half-measures. As such, the next few months, within 2016, will be crucial for the formulation of the desired model for the reorganisation of the market.

RES & Energy Efficiency

The growth of RES over previous years held back the general economic recession to a great extent and functioned as a support pillar for the technical sector in Greece which following the collapse of building activity and the overall stagnation observed in major technical projects experienced and is still experiencing an unprecedented crisis at all levels. RES however must be developed using the right mix

contributing to “green” electricity for the coverage of overall demand in real time. Greater penetration of RES demands transformation of the network and a better interconnected network as well as storage in the future. Because of its position Greece does not enjoy the electricity interconnections of other central European countries to ease production fluctuations and production – demand discrepancies especially because of RES, while interconnections with the systems of northern neighbours cannot secure easy access to the markets of central Europe for serious quantities of power. Subsequently the ambitious growth of RES must pass through the transformation and expansion of networks using innovative technologies and absolutely with the precondition of the broader growth of the economy and an increase in domestic electricity demand. Given that RES investments are characterised by capital intensity, borrowing must become possible and with favourable terms since in conditions of recession borrowing is onerous and high risk for producers.

Despite having faced an investment standstill in 2015, Renewable Energy Sources (RES), could contribute to the efforts for production reform and employment, assisting the Greek economy to recover.

The securement of the sustainability of operational RESs must be a priority for the government since the resumption of investments does not require additional measures. In relation to existing projects it was made clear that the normality of contracted payments must be maintained and that retrospective cuts of electricity sale prices or surcharges to company profits as anticipated by the expected implementation of disconnectibility adjustments must be avoided. In relation to the projects already underway there are significant problems in the execution of payments, orders and funding due partially to banking capital controls, while it is imperative for the State to respond to its obligations within the framework of co-funded projects. New projects will moreover require the readjustment of energy planning and the reform of the legislative framework given the new market conditions and EU directives.

It was also highlighted during the conference that the Target Model will intensify the phenomenon of the transportation of large quantities of electricity over large distances something which will create the need for cross border power adjustments. The electricity productions sector needs cross border adjustments connected to the Target Model as well as the adoption of the practices of the Transportation Operators in Distribution. The development of penetration methods for dispersed production is a necessary pillar for the maximisation of RES penetration in the energy mix, while, at the same time, it reduces Medium and Low Voltage network losses.

One of the main conclusions in relation to RES was that the interconnection between Crete and mainland Greece must absolutely be characterised as a priority at national energy strategy level for the reduction in the consumption of oil and Utilities, and will make the exploitation and greater penetration of RES feasible. The scenario relating to the interconnection of Chania with the Peloponnese via 2 EP underwater cables, 140 km long, is apparently being examined as an immediate solution connected to the operation of the new Megalopoli station. Today however, the RES sector on the island is not growing at the desired rate, due to the uncertainty around investments in the sector and the lack of interconnectivity with mainland Greece.

Also highlighted was the important role of energy saving which is now included in the EU’s energy targets (30% increase of energy efficiency by 2030) and Greece must create the mechanisms to support these actions.

Natural Gas

Against the 2050 horizon, the contribution of coal, lignite and oil in the EU is decreasing and will decrease even further, while production from RES is gradually increasing at an intensifying pace. Natural gas plays an exceptionally important role within this gradually but steadily changing energy mix and is the only fossil fuel that can be used to bridge the gap between current reality and the 2050 reality. This is due to natural gas's two main characteristics: low carbon emissions per produced MW and natural gas unit flexibility which is necessary for the operation of Electricity Systems with high penetration levels of intermittent RES production (such as wind and solar power).

As noted at the conference, the European market will in the future become a very attractive destination for LNG exports thanks to the decrease in the price difference between Asia and Europe. Over the next 5 years LNG growth globally is expected to be particularly important while natural gas and RES will be the "great partners" of our energy future.

Greece has already entered a gradual diversification from the use of lignite for electricity production while a basic criterion of the rhythm of the reduction of the use of lignite will clearly be its cost as a fuel for electricity production. Already with today's relatively low CO2 emission rights prices natural gas units in Greece are more competitive than several lignite units. Indeed one of the main targets of the energy strategy is for natural gas supply contracts to become more attractive while it should also be noted that prices are already more competitive in relation to the past and also to other European countries.

In relation to the natural gas supply there was great optimism for the further growth of the natural gas market in Greece and in SE Europe since large cross-border pipeline projects such as TAP and IGB have entered construction phase. Although the region's dependence on Russian natural gas remains high, there is a clear target for the greatest possible diversification of sources and the promotion of Greece into a natural gas transit corridor via the TAP and IGB pipelines but also through the use of floating LNG station for the supply of the Balkan markets. A strategy of extrovertness is being signalled for DEPA which is developing initiatives and exploring various projects. An important conclusion from the discussion that took place at the conference is that ITGI remains in the news since it is a mature project that has so far cost EUR 25 million for all the relevant studies. For Greece the construction of the infrastructures which will secure the increase of natural gas liquidity into the country such as the IGB Greece – Bulgaria interconnection pipeline, the TAP and the FSRU in Alexandroupoli is now a priority for the development of further LNG infrastructures in Greece. Since Greece is the only country to have a terminal at the Aimos peninsular, supply to the SE Europe market is expected to begin. At the same time the targets for interconnectivity, interfunctionality and the formulation of a common regulatory framework for the region's countries must move forward.

Speakers supported that the main aim is to promote Greece as a gas transit hub for the entire region. There is already a gas invoicing hub in Greece via the Virtual Nomination Point (VNP) as well as the programme for the provision of quantities of natural gas from DEPA via digital auction which began operating in 2015. 33% of gas to Greece this October was via the VNP.

Hydrocarbons

The sharp drop in international oil prices and the consequences of this drop abroad and in Greece were at the epicentre of the conference. On the international market, large hydrocarbon companies such as Chevron, Exxon, BP, Shell and Centrica suffered great reductions in their profits and postponed numerous investment programmes in the Upstream sector which will have effects on future oil production. The general impression expressed by many speakers at the Conference was that an immediate rise of international prices for oil is not expected soon. This has led to a new order of things

in oil where Saudi Arabia, as head of OPEC is keeping prices low without reducing production. However, low prices are having a positive effect on the economies of countries who are dependent on oil like those in SE Europe which, in their majority, are highly dependent on oil imports and are saving resources which contribute to the decrease of their deficits.

Discussions focused on hydrocarbon exploration in Greece and the point was made that the Upstream sector in Greece is at a critical turning point; next steps must be very careful so as not to risk the course of the explorations to date. It was moreover repeatedly underlined at the conference that the exploitation of natural resources is a growth option with multiple benefits for society and the economy. This was further supported by the fact that following the completion of the second international round of concessions in July 2015, and the submission of three offers for 20 offshore blocks in the Ionian Sea and the area south of Crete, Greece has made its mark on the international upstream map.

It is imperative at this critical stage of hydrocarbon exploration for there to be a comprehensive plan for energy policy, a deep understanding of the international environment, systematic efforts for the fulfilment of specific targets and, ultimately, prudence, consistency and patience. It was also highlighted that the observance of the terms clearly defined in the tender declarations for the concession of the areas in Western Greece and the Gulf of Patra for exploration and exploitation is essential for the hydrocarbon sector to be developed with safety, protection for the environment and benefits for local communities.

Important developments for oil production in Greece also include the revival of Prinos and the pending horizontal drilling in Katakolo by Energean Oil & Gas where, if there are no delays, oil will start being produced by 2018 forming the first hydrocarbon production in Greece in an area other than the North Aegean. In relation to the Gulf of Patras and the exploration undertaken by HELPE in the area: this is a promising region but at the same time extremely complex with difficult geological targets. Within a five-year period, it will have become clear if there is commercially exploitable oil in the Gulf of Patra.

Over the past year very positive results have been achieved in the Greek refinery sector in relation to the profits achieved despite the consequences of the crisis and the important reduction of domestic petroleum product consumption. This was achieved through the increase in the volume of exports between 2008 and 2015. As noted, intense pressures on the refinery sector highlight and necessitate, as a main medium-term target the securing of the competitive international presence of the Greek refinery sector. Moreover, an important parameter for the good and competitive operation of the petroleum product sector is also the attempted adoption (a) of the European positions for the transformation of the energy system, (b) innovative business models while there must also be a re-orientation towards new energy actions and products (RES, natural gas, electricity) with a parallel strengthening of the petroleum sector as defined in the framework of European energy transformation.

In conclusion, this year's 20th IENE "Energy & Development" Conference, with broad participation and despite the fact that Greece has not yet surpassed its difficult economic and social conjuncture emitted a note of optimism. An optimism based on the opportunities that admittedly exist today in Greece for the further growth of the sector. A growth which will come via investments and genuine reforms aimed at the reform and rationalisation of the market's operation. This can be achieved in partnership with appropriate Greek and European organisations and companies. The latter, thanks to the high training of their staff and their dynamism appear ready to respond to and participate in the reformulation of the regulatory and operational framework currently being attempted.

