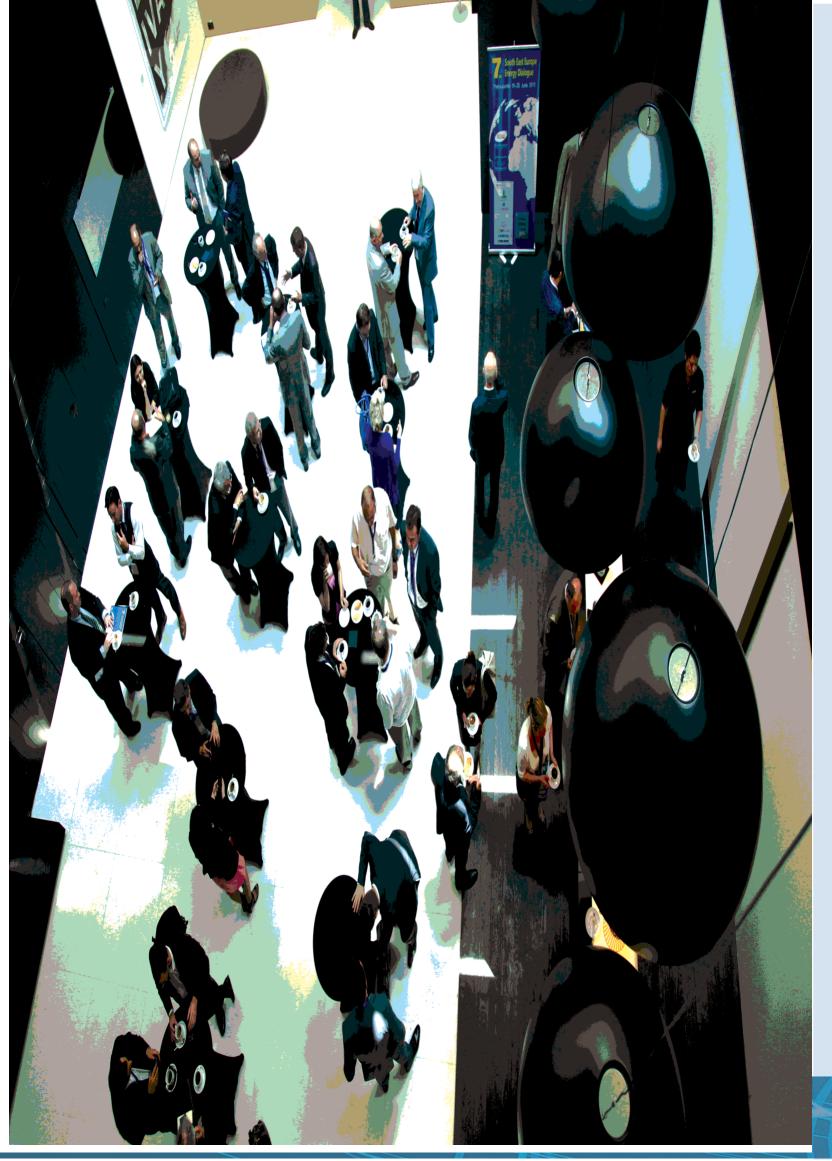
THE LEADING ENERGY FORUM OF SOUTH EAST EUROPE



SOUTH EAST EUROPE ENERGY DIALOGUE

ORGANISED BY
THE INSTITUTE OF ENERGY FOR SOUTH-EAST EUROPE (IENE)
IN PARTNERSHIP WITH LEADING
INTERNATIONAL ENERGY ORGANISATIONS



Background

In fulfillment of its regional and international role, IENE has been continuously organizing, since 2007, the "South East Europe Energy Dialogue" (SEEED) which takes place in the city of Thessaloniki in northern Greece in late May or June every year. IENE's "Energy Dialogue", the top international event of the Institute, has been serving as a forum for furthering the idea of a S.E. European energy bridge involving all the countries of the region.

The "South East Energy Dialogue", as part of IENE's series of international meetings, was first organized in June 2007 and has been providing, ever since, a truly regional forum for discussion, analysis and networking. SEEED brings together high-ranking government officials, senior business executives of major energy companies, as well as energy experts from the countries of S.E. Europe but also from oil and gas producing countries.

The scope of this unique gathering is on the one hand the exchange of information and ideas, and on the other the conduct of high level discussions on the action required in order to tackle the pressing energy supply and security issues together with the environmental challenges facing the region. SE Europe Energy Dialogue's constant aspiration has been to contribute towards 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 and North-South energy bridge.

Delegates to the SEEED come from all over SE Europe: Turkey, Bulgaria, Romania, Hungary, Serbia, FYROMacedonia, Croatia, Slovenia, Bosnia-Herzegovina, Montenegro, Kosovo, Albania, Greece but also from Austria, Italy, Israel and Cyprus and from further afield including the UK, France, Belgium, Spain, Switzerland, Germany, Russia, Ukraine, Azerbaijan, Kazakhstan and Iran. In addition, senior staff from the European Commission, the Energy Community, the International Energy Agency (IEA) several international and European energy organizations have participated in IENE's "Energy Dialogue" meetings.











Representatives from top international energy companies have been among the speakers and panelists of the SEEED conferences.

Stemming from the workings of the "South East Europe Energy Dialogue, an "International Advisory Board" has been formed, a so far informal body, which assists IENE on an advisory capacity with international and regional issues, enhancing further the role of "SEEED" as a platform of regional dialogue and interaction.

The themes which are normally discussed during the "Energy Dialogue" meetings include the following:



- Global and regional energy security
- Energy supply and demand: current situation and outlook
- Update on major regional energy projects
- Hydrocarbon exploration and production
- The Climate Change agenda
- Integration and competition in the SE European Electricity Market
- The development of a regional natural gas market
- RES, alternative fuels, new technologies and the road to decarbonisation
- Energy Efficiency, cogeneration and demand side management
- Energy business and investment climate in SE Europe

On several occasions the S.E. Europe Energy Dialogue was organised in partnership with the **World Energy Council (WEC)** while it is normally held under the auspices of the Hellenic Ministry of Environment and Energy.

Over the years, IENE's "Energy Dialogue" has been sponsored by several leading regional and international energy companies (see list and logos of sponsors and supporters on the back page).







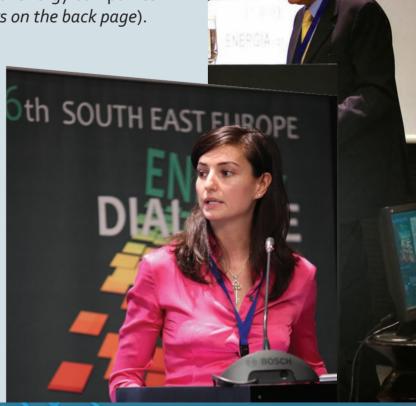
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South East Europe's Seminal Energy Forum

The purpose of this well established IENE regional forum, which is being backed by leading international and regional organizations and major energy companies, is to bring together high-ranking government officials, senior business executives and energy experts from all countries of S.E. Europe and beyond but also from international organisations and major energy producing countries. The objective being the exchange of information and ideas, networking and the development of co-operation for the tackling of the increased global and regional energy, security and environmental challenges.

As the special theme of the 2016 meeting signifies, "The Quest for a New Energy Balance", the rebalancing now taking place in the global and regional energy markets, in more ways than one, is a subject of main concern. Another important issue is EU's major drive to establish an "Energy Union" and the emphasis placed on energy security in view of persisting regional instability (e.g. The Syria conflict, Libya's unrest, mounting refugee crisis, Ukraine's territorial issues etc.). SE 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 emerge as key policy issues.

The Dialogue focuses too on 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.

After ten successful years the SEEED is now considered the seminal regional energy event that has managed to engage not only the region's top policy-makers, financiers and entrepreneurs but also secure high-level participation from some of the world's leading energy and banking institutions, including the International Energy Agency (IEA), the European



Commission, the Energy Community Secretariat, the Energy Charter, World Energy Council (WEC), Energy Fuel Europe, Eurelectric, Eurogas, EFET, EPIA, COGEN, EBRD, EIB and the World Bank. The forum's delegates and speakers over the past years have included senior executives from well known international corporations such as BP, Shell, Gazprom Export, Statoil, EDF, GDF Suez, ENI, ENEL, RWE, EON, Endesa, PPC, Serbgas, NIS, Plinacro, Transelectrica, Transgaz, KESH, AERS, RAE, Bulgarian Energy Holding, CEZ, Edison, DEPA, DESFA, Energean Oil and Gas, Mytilineos Group, Hellenic Petroleum and many others.

The IENE by organising this year's "SE Europe Energy Dialogue" aspires to contribute once again 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.



10 Years of Successful Events

Starting from June 2007 the "Energy Dialogue" has completed nine rounds of meeting as follows:



1st S.E. Europe Energy Dialogue, June 27-28, 2007



In Search of a Common Framework emerged as the key theme of this first conference



2nd SE Europe Energy Dialogue, May 21-22, 2008



The Security of Energy Supply was one of the main themes along with "electricity market competition"



3rd SE Europe Energy Dialogue, June 18-19, 2009



The Investment Outlook of the Energy Sector of SE Europe was the dominant theme of the conference as the investment prospects appeared subdued following the global financial crisis



4th SE Europe Energy Dialogue, June 3-4, 2010



The Regional Integration of Electricity and Gas Market was one of the prevailing themes of the conference as new electricity and gas interconnection projects attracted regional attention



5th SE Europe Energy Dialogue, June 2-3, 2011



Electricity and Gas Infrastructures Priorities in SE Europe

—Towards a Regional Market
was the main theme of the conference as significant
regulatory issues were at the centre of the energy agenda



6th SE Europe Energy Dialogue, May 30-31, 2012



Redefining SE Europe's Energy Map was the main theme of this conference as many new major energy projects were being announced 7th SE Europe Energy Dialogue, June 19-20, 2013

The New Regional Parameters was the main theme of this conference as high oil and gas prices were driving market developments



8th SE Europe Energy Dialogue, June 11-12, 2014

The New Energy Mix was tabled as the main theme of the conference to signify the major shifts taking place in policy and market dynamics



9th SE Europe Energy Dialogue, June 29-30, 2016
The Quest for a New Energy Balance







Energy Dialogue Achievements

uring course of the last ten years, a period when "Energy Dialogue" meetings were held in Thessaloniki, a number of new ideas and initiatives were born relevant to the key energy issues confronting in policy formation and encompassing the broader region. One such idea was the creation of a series of regional workshops and discussion groups to be organised by IENE in co-operation with local personalities and organizations. The objective was to focus on a number of top priorities, burning issues as such, and discuss them at country level by bringing together local actors and important regional players. In this context a number of such workshops and rountables were organised in different cities in SE Europe covering such diverse themes as the Opening up the West Balkans Energy Market (Belgrade 2012), Bulgaria's Green Energy Challenge (Sofia 2012), the Nuclear Option for SE Europe (Sofia 2009, Bucharest 2015), the Energy Trilema (Bucharest 2013), Energy Infrastructure and Investment (Cyprus Energy Symposia 2012, 2013, 2014, 2015), Energy Policies and Strategies in SE Europe and the role of Albania (Tirana 2012), roundtable discussion on Albania's hydroelectricity sector (Tirana 2013), high level meeting on Energy and Geopolitics (Sofia, March 2014), Opening up the West Balkan Energy Market (Zagreb 2014), Gas and Energy Security in SE Europe (Vienna 2015), and Investing in the Hydroelectricity Sector in Albania (Tirana 2016).



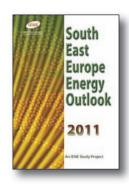
Another interesting project which emerged from the "Energy Dialogue" series was the compilation of a regional energy atlas. This lead to the publication of the "SE Europe Energy Outlook", first published in June 2011 while a fully updated and revised edition is to be published in 2016. The "Energy Outlook for SE Europe" has since developed into a major reference study for the entire region bringing together a whole team of experts, from almost all countries of the region. In this sense the "Energy Outlook" reflects a unique regional collaborative effort which could bear more fruits in the energy research and applications field over the coming years.

In view of the tremendous progress achieved over the last 10 years in the various facets of energy policy issues in SE Europe it is fair to state that another achievement of IENE's "Energy Dialogue" series has been the establishment of a much closer and effective collaboration and understanding between the different energy players of the region thus facilitating regional energy integration. A process which has lately acquired a new significance following the adoption by the EU of the Energy Union which places particular emphasis on regional co-operation, energy grid connectivity and energy market integration. The very specific topics and priorities which the "SE Europe Energy Dialogue" targeted right from its first gathering in Thessaloniki in June 2007.



South East Europe Energy Outlook

Publication of the first such study by IENE in 2011, (see cover) should be considered as an important achievement which owns its origin in one of the many sessions of SEEED. The SEE Energy Outlook is a comprehensive study, which deals with the current energy situation in the SE European region but is also concerned with its 'Outlook" from now until 2050. The current study covers all 13 countries of the region. These countries include: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Slovenia, Cyprus, Former Yugoslavian Republic of Macedonia, Greece, Kosovo, Montenegro, Romania, Serbia and Turkey.



The 2016 SEEEO is the second such study undertaken by IENE. The study contains substantial comparative data, detailed sectorial analysis, estimates and projections. After a compendious introduction, in which the economic and political background of South East Europe is thoroughly presented, the study examines the impact of the regional integration process on SE Europe's energy prospects. The advent of EU's Energy Union is also discussed and analysed in relation to its anticipated catalytic role in accelerating energy market integration in SE Europe. The study comprises four main parts: country energy surveys, regional economic and energy analysis, sectorial analysis and energy investment outlook. It also in-

cludes energy demand and supply projections for 2020/2025 and beyond.

The regional energy sector analysis focuses on the region's economies, on oil (upstream, midstream, downstream), natural gas, power generation, renewable, energy efficiency, co-generation and environmental issues. A major part of the study concerns the individual countries of the region and contains an energy overview of each one of them. A set of original energy maps for the region has been created, together with comparative data tables and economic analysis. Another important part of the study covers the energy interconnections in South East Europe and in the Black Sea region for oil, gas and electricity. The major energy projects in the region (oil and gas pipelines, gas storage, nuclear plants, hydrocarbon exploration projects, refineries, RES installations) are described and fully analysed. The study also covers latest developments in the energy market liberalization process but also the environmental and energy security considerations in South East Europe. The study concludes with an in depth analysis and projections of the current and future investment potential and business opportunities of the region's energy sector. The structure of the study is presented in the Table of Contents which follows.

The current "SE Europe Energy Outlook 2015/2016/2017" (see cover) study was carried out over a two year period (2015/2016) largely based on IENE's ongoing study research and analysis of the region's key energy issues. The need for this study emerged from IENE's quest to understand the geopolitical and geographical sphere within which it operates, but also to define and evaluate in an objective manner the major policy challenges which lie ahead in the energy sector of the region. Parallel to that, was the equally important need to identify the important investment and business opportunity areas across the region.

Judging from the present body of work and the extensive database which IENE has built over the years on SE Europe's energy sector, we can safely say that IENE is fulfilling one of its primary goals, which is to acquire an in-depth understanding of energy markets operation and an assessment of their potential development in SE Europe. The depth of analysis, the substantial statistical data and the detailed regional and country profile information included make the study a useful tool, sort of an energy atlas of SE Europe.



Given the current state of affairs in SE Europe and the constant flux, which characterizes most energy markets and the fact that certain key transnational

projects, such as main oil and gas pipelines, have suffered serious drawbacks, with final investment decisions being constantly postponed, and which is bound to affect investment in the energy sector as a whole, the study provides some useful insight on background developments, at both government and company level, which are likely to affect the outcome of key projects over the coming years.

In addition to the "S.E.E. Energy Outlook" study project and in line to its commitment for an active S.E. European Energy Dialogue, IENE has carried out a series of pioneering studies of regional importance. These studies between them cover a diverse range of topics and aspire to provide comprehensive information and analysis of the region's crucial energy issues. Contributions to these studies have come through experts from all different countries in SE Europe and normally involve their participation in regional workshops and conferences and the setting up of joint working groups.

Regional Studies

The following titles are representative of the type of studies that IENE has successfully carried out over the last five years in the context of the SEE Energy Dialogue process.

- Europe's Natural Gas Supply Prospects, the South Corridor and the Role of Greece, IENE Study (M10), January 2012
- The Helios' Project: Can Solar Energy be Exported?, IENE Assessment Study, (M11) February 2012
- The Role of Greece as a Supply Route to Europe in View of the Latest Gas Discoveries in the East Mediterranean, IENE Research Note No 3, December 2012
- An Overview of the South Corridor Gas Pipeline Projects, IENE Briefing Note No2, July 2013
- Renewable Energy Sources and Energy Efficiency and Their Role in SEE Energy Security, IENE Work Paper No 19, February 2014
- The Outlook for a Natural Gas Trading Hub in SE Europe, IENE study (M19) September 2014
- Gas Storage in SE Europe and the Role of LNG, IENE Study, (M18) March 2015
- The Vertical Corridor: From the Aegean to the Baltic, IENE Study, (M26), May 2015
- The Nuclear Power Generation Programme of Turkey, IENE Briefing Note No6, June 2015



An Expanded South Corridor

Since the start of the Energy Dialogue the concept of developing a major energy artery for shipping natural gas from the resource rich Caspian region to energy hungry Europe, via the countries of SE Europe, became a central issue for analysis and debate. Back in 2007-2010 an intense race between competing gas pipeline schemes such as Nabucco, ITGI and at the time outsider TAP, was most evident. In a way, the forum provided by IENE through the 'SE Europe Dialogue' proved catalytic in many respects. The emergence of TAP along with TANAP as the front runner project for implementing the first leg of the South Corridor became first noticeable in Energy Dialogue conferences and workshops (2011-2012) with the gigantic South Stream pipeline project appearing on stage almost at the same time.

Today, that the first leg of the South Corridor is firmly on the road of implementation, the expansion of South Corridor into a much wider and more diversified energy corridor (see map) is being considered. Once again the 'Energy Dialogue' forum organized and hosted by IENE, has become a fertile ground for discussion, analysis and synthesis with representatives of most companies involved in the various facets of this fast-developing regional energy grid, actively participating in the annual 'Energy Dialogue' conference and related meetings.

About IENE

GOALS AND OBJECTIVES

The Institute of Energy for South-East Europe (IENE) was founded in Athens in 2003 by a group of independent scientists and business executives active in the energy sector. IENE is a non government and non-profit organisation.



The Institute's prime purpose is to constitute a permanent forum where energy issues can be discussed, analyzed, reformulated and presented to the scientific and technological communities, social, productive and financial entities, as well as to institutional bodies, in unbiased, objective and

credible terms, guaranteed by its scientific standing, its managerial rectitude and the transparency of its operations.

One of IENE's key objectives is to contribute to the formulation of energy policies, both at a national and international level, within the broader region of South-East Europe. These policies need to focus on rationalizing the production and utilization of both conventional and renewable sources of energy. Thus IENE aims to partake in the implementation of the European Union's sustainable development strategy that combines social and economic development with environmental protection.

The Institute aspires to play a significant role in providing public opinion with factual and unbiased information on subjects concerning energy, the environment and sustainable development. It is fair to say that since its foundation, IENE has provided a suitable platform for the discussion and analysis of the crucial energy and environmental issues which today confront the broader S. E. Europe region.



IENE'S MISSION AND VISION

IENE's primary **mission** is to promote a broader understanding of the key energy and environmental issues in the region and provide a suitable platform for the exchange of views and information, open to professionals, companies, stakeholders and others who are actively involved in the energy sector.

IENE's **vision** is to establish itself as the leading energy think tank in the region and at the same time develop a highly credible and worthwhile range of services covering research, assessment studies, sectorial surveys, educational activities, event organisation and networking. These services to be offered primarily to its members, but also to government and industry and other istakeholders.

Through its work paradigm, IENE aspires to become one of the leading energy institutes in SE Europe. To this end, it works closely with energy experts and policymakers and established academic centers in the various countries of the region. As part of its mission IENE participates actively in public consultations in the different countries but also at European level.

As part of its mission IENE is committed to developing high level research and analysis capabilities, with the involvement and in cooperation with leading energy experts from all different countries of the region. The timely dissemination of information and analysis is an integral aspect of IENE's work with the aim of facilitating the understanding of central policy and complex technical issues thus helping to promote public debate.

The establishment of serious and dispassionate dialogue on SE Europe's key energy and environmental issues is seen as part of a democratic policy making process to which IENE is fully committed. Furthermore, IENE wishes to actively contribute to the better understanding of energy use, including the formulation of realistic energy strategies and policies across the region. IENE believes that every effort must be made to utilize to the highest degree possible the region's extensive indigenous energy resources and thus lessen its dependence on fuel imports of all sorts.

AREAS OF ACTIVITY

- The main areas of work which are covered by IENE's activities include the following:
- Generation, transmission and distribution of electricity from both conventional and alternative energy sources (I.e. solid fuels, large hydroelectric plants, RES, oil and gas, nuclear)
- Research, exploration, production and exploitation of hydrocarbonresources
 (i.e. upstream, midstream, downstream)
- Research into the application and utilisation of Renewable Energy Sources
 (i.e. solar and wind energy, small hydro, biomass, geothermal, wave energy)
- 🧶 Energy conservation and energy efficiency in the building sector 🧲
- 🤎 Management of refuse and waste and related energy production and use 🧲
- The use of "clean" technologies for power generation using conventional fuels and CCS/CCU applications
- Energy and its role in transportation including the use of electricity, biofuels, natural gas and hydrogen as alternative fuels
- Climate change mitigation including the elaboration and promotion of pro RES and Clean Fuel policies
- Participation in the formulation of national and regional energy policies and strategies and organization of relevant public consultations
- Legal and financial issues related to energy production and use



COOPERATION IN SE EUROPE

ENE participates actively in the promotion and dissemination of new energy technologies, the transfer of know-how, and the implementation of EU policies and directives. Within this framework, IENE cooperates and jointly promotes such goals and projects with counterpart agencies and entities in the various countries of the region. Particular emphasis has been given to networking and cooperation with energy companies, institutions, agencies and organizations, research centres and scientific establishments but also with individual experts active in the energy and environmental sectors in SE Europe. The Institute stands ready to contribute to the elaboration of policies necessitated by international commitments and as part of collaborative programmes. IENE aspires to become an important bridge for energyrelated communication and analysis and energy project development between the various counties of SE Europe.

An informal network of contacts from all different countries in SE Europe, which includes individuals as well as organizations, has been established over the past years, which enables IENE to carry out its work at a regional level. These contacts help the Institute by providing reliable information on national energy balances, energy planning, environmental, economic and legal issues, market status and project development. This regional network also helps IENE in identifying suitable and well qualified persons, organizations and companies to participate in IENE and EU backed research programmes and projects. This so far informal "International Advisory Group", which assists IENE with inter– national and regional issues, has emanated from this networking, and mainly from the workings of the "South East Europe Energy Dialogue", the Institute's major annual international event.





Sponsors and Supporters of South East Europe Energy Dialogue

The 'SE Europe Energy Dialogue' has over the years (2007-2016) been made possible thanks to the generous contribution of several companies which in the form of sponsorship have at one stage or other provided the necessary financial support. IENE acknowledges with thanks the valuable contribution of these companies and organisations which are cited below.













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