

# **2019 Annual Report**

## **and Review of Activities for 1<sup>st</sup> Half of 2020**



**Athens, October 2020**



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## 1. The Institute of Energy for SE Europe

## Introduction

This Annual Report aims to provide accurate information about the Institute of Energy of South-East Europe (IENE) and its activities and is mainly addressed to its Partners, its members, its institutional stakeholders as well as to government agencies and state supervised organizations at large.

The first part of this report covers the Institute's activities for 2019, including financial data, while the second half presents an account of its proceedings for the first half of 2020.

The Annual Report and IENE's Balance Sheet for 2019 was approved by the Annual General Meeting (AGM) of October 21, 2020. Normally the AGM takes place in June but this year due to complications arising from the coronavirus pandemic it was postponed for October.

A quick glance at the Annual Report helps to understand the work carried out by IENE including the regular information gathered, analysed and subsequently sent to its members which constitutes one of the Institute's core activities, in addition to research, study work and educational activities undertaken by it. Furthermore, the report describes IENE's activities in the area of events including conferences, workshops, discussion groups in Greece and in the countries of SE Europe through which its members not only acquire expert knowledge in the area of energy but also gain access to recognized experts in the broad energy sector. At the same time IENE's members can participate in high level discussions with important actors of the energy sector as well as representatives from the academic and research community.

The second part of the Annual Report focuses on the research and study activities of the Institute, which constitutes another highly important activity. The retrieval and presentation of relevant data originating from completed studies, reveals the depth and breadth of the work undertaken by the Institute. Finally, an account is presented of the conferences and other events organized by the Institute in Greece and in other countries of SE Europe, as well as of its educational work, which has focused mostly on high level specialized professional courses.

The overall aim of the Annual Report is to present the reader with a comprehensive picture of IENE, its organization and range of activities. IENE is essentially a regional institute operating in the broader area of South East Europe. Over the years the Institute has been established as an important reference point on SEE energy issues.

**Costis Stambolis**

Chairman & Executive Director

Athens, October 2020

## 1. The Institute of Energy for SE Europe

### ➤ Aims and Objectives

The Institute of Energy for South East Europe (IENE) is a non-profit organization active in the SE European region whose main purpose is the study, analysis and research of energy issues as well as the provision of information to professionals active in the energy sector and to the public opinion in general. IENE's aim is to become a focal point for the region's energy issues and thus to constitute an unbiased, objective and reliable forum where energy issues can be discussed, analyzed and presented to the scientific and technological communities, to all different stake holders and to the relevant government institutions. IENE's objectivity, reliability and credibility is ensured by its scientific competence and administrative rectitude as well as by the absolute transparency guiding each and every one of its actions.

IENE's Vision is to establish itself as one of the leading energy think tanks 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 important stakeholders. As part of its vision 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.

The Institute was founded in 2003 by a small group of independent energy professionals who were, and still are, actively involved in the energy sector under various capacities. This initial group of IENE partner-founders has gradually expanded, consisting of 29 individuals, who form the Institute's General Assembly.

The Institute, with its headquarters in Athens, Greece, is a non-profit civil partnership and its charter can be found on the Institute's website, namely [www.iene.eu](http://www.iene.eu).

IENE's ultimate goal is to participate in the formulation of energy policies at national, regional and global level, within the wider region of South-East Europe. These policies focus on the rationalization of the production and utilization of both conventional and renewable sources of energy as well as the promotion of new environmentally friendly energy sources including energy efficiency. IENE's work is in line with the European Union's sustainable development strategy, which is environment sensitive, provides for energy security and supports the adoption of climate goals towards long-term carbon neutrality.

In this context IENE pursues in parallel policies aiming at economic and social development whilst ensuring competitiveness in the energy sector.

### Areas of Interest

The energy sub-sectors covered by IENE, through its various activities include:

- Energy policy/energy planning, energy strategy
- Production, transmission and distribution of electricity, smart grids and storage
- Hydrocarbon research, exploration and production
- Oil refining, storage and trade
- Transportation, storage and trade of natural gas
- RES exploitation in order to achieve maximum penetration in the energy mix
- Energy Market Development and Competition
- Waste management in relation to the production and energy use.
- Clean energy technologies
- Energy, Environment and Climate Change
- Energy and transportation
- Energy efficiency and advanced technology use and management
- Heating and cooling of buildings, and construction of buildings of zero or close to zero CO<sub>2</sub> emissions.

The activities of IENE, which are presented in greater detail in the relevant chapters of the Annual Report, are the following:

- Study, analysis and research work
- Information dissemination through specialized newsletters, reports, studies and conference proceedings
- Press briefings
- Educational work, professional courses, seminars and lectures
- Organisation of events (workshops, seminars, and conferences)
- Participation in European and international programmes and projects

## ➤ Organisation and Operation

The partners of IENE constitute the General Assembly of Partners (GAoP), which is the highest administrative body of the Institute and has the responsibility for all critical decisions concerning the direction and the work of the Institute. At present GAoP also acts as the Institute's Board of Directors.

In addition to the General Assembly of Partners, an Executive Committee (EC), which consists of 7 members- and is elected by the General Assembly (GA) for a two-year term, is responsible for the day-to-day operation of the Institute. The Executive Committee, which meets on a regular basis, reports to the Board of Directors and undertakes the implementation of the General Assembly's resolutions.

Besides, the work of the Institute is supported by its inhouse staff and external research associates, as well as by the Scientific Committees, which effectively contribute to the Institute's activities by analyzing latest developments, by formulating views and by tabling proposals for further work. In consultation with the Executive Director, the Scientific Committees also undertake the assessment of proposals, and studies and also assist in the participation of the Institute in public consultations.

More information about the Institute's management, its partners, staff and its Scientific Committees is provided in "Administration and Organisation of IENE". Information on IENE's personnel is given in greater detail in ANNEX I.

## ➤ IENE Members

Like most scientific institutes, IENE relies on its members for its operation and development. These may be individuals, companies and organizations. IENE members play an active role in the Institute's activities through participation in its events, its scientific committees and in various working groups convened by the Institute. All professionals, active in the energy sector may apply for membership to IENE. The following categories of members are stipulated:

- New Scientist (for students and graduates up to 28 years old)
- Full member (for professionals over 28 years old)
- Corporate member (covering companies, legal entities, public organizations)
- Associate member (upon invitation)
- Honorary member (by award)

IENE members are regularly informed about the Institute's work, its programme of events and publications. Members can actively get involved in the scientific and other committees according to their interests and specialization as well as participate in all Institute events. In order to become a full member or a corporate member, one should complete the



relevant registration form. The application and other useful information may be found in IENE's websites, [www.iene.gr](http://www.iene.gr) and [www.iene.eu](http://www.iene.eu). A detailed list of IENE's corporate members is given in Annex II.

### **Funding**

As an independent organization, IENE does not receive any governmental grants or stipends or any other form of financial assistance, and the main sources of funding for its operation are contributions by its members in the form of annual fees, sponsorship by companies and organizations which support specific various aspects of the Institute's work (studies, research programs, publications, events) and its participation in EU funded or other research programmes. A detailed list of IENE's sponsors and supporters is presented in Annex III.

## 2. Administration and Organisation

## 2. IENE: Administration and Organisation

### ➤ IENE's Executive Committee

The composition of IENE's Executive Committee, which was elected on June 20, 2019, for a two (2) year term, until June 2021, is as follows:

#### **Chairman & Executive Director:**

- Mr. Costis Stambolis

#### **Deputy Chairman:**

- Mr. Gus Papamichalopoulos

#### **Secretary General:**

- Mr. Konstantinos Theofylaktos

#### **Members:**

- Mr. Anastasios Tosios
- Mr. Thomas Lamnides
- Mr. Dionysios Xenos
- Mr. Christos Dimas

### ➤ General Assembly of IENE Partners

IENE's General Assembly of Partners, which also acts as its "Board of Directors" (BoD) is the responsible body which takes all key decisions concerning the direction and work of the Institute. The Board of Directors consists of 29 members\* as follows:

- Emilios Bousios, Mechanical Engineer, ex- Managing Director of PPC
- Professor Pantelis Capros, Engineer-Economist, ex-Chairman of RAE, Prof. of Energy Economics, School of Electrical Engineering, NTUA, Director of E3M Lab
- Ioannis Chadjivassiliades, Mechanical-Electrical Engineer, Independent Energy Consultant
- Dr John Desypris, Chemical Engineer, Director, Department of Regulatory Affairs, Mytilineos SA
- Mr. Christos (Christodoulos) Dimas, Civil Engineer, NTUA, ex General Director, HELPE – THRAKI SA
- Dr. Nikos Frydas, Electrical & Mechanical Engineer, ENTSO-e Executive, Brussels
- Tereza Fokianou, Geologist, Chief Executive Officer, FLOW A.E. and ex-Chief Executive Officer of DEP- EKY
- Dr. Eugenia Giannini, Attorney at Law, Eugenia Giannini & Associates
- Yiannis Grigoriou, Petroleum Geologist, ex. CEO, HELPE Upstream
- Professor Emmanouil Kakaras, Mechanical Engineer, Professor of Electrical Engineering, NTUA

- Dr. Konstantinos Karayannakos, Executive Director Commercial Activities, DEPA SA
- Elias Karidogiannis, Electrical Engineer, Consultant Engineer, CEO of ENSCO SA
- Petros Kassapis, Civil Engineer
- Dr. Vassilis Kougionas, Scientific Officer, DG Research, European Commission, Brussels
- John Kourouklis, Mathematician, Deputy Chairman and CEO, ELIN Verd
- Thomas Lamnidis, Lawyer, Principal, LL Legal firm
- Dr. Konstantinos Nikolaou, Petroleum Geologist and Deputy Chairman, Energean Oil & Gas
- Spyros Palaogiannis, Chemist (MBA), MEDGAS Managing Director and ex Chief Executive Officer of DEPA
- Alexandros Papadopoulos, Mechanical Engineer, Consultant Engineer
- Konstantinos (Gus) Papamichalopoulos, Lawyer, Partner, KG Law Firm
- Dr. Dimitris Papakonstantinou, Mechanical Engineer, Director of Strategy at HEDNO
- Dr. Marios Patsoules, Geologist, Petroleum Reservoir Engineer, ex-Hellenic Petroleum Executive
- Sophia Politopoulou, Electrical Engineer, Regulatory Branch Director, Hellenic Electricity Distribution Network Operator (HEDNO SA)
- Nick Sofianos, Economist, Independent Energy Consultant
- Costis Stambolis, Energy Strategy Advisor, Market Analyst, Managing editor of [www.energia.gr](http://www.energia.gr),
- Konstantinos Theofylaktos, Mechanical Engineer, Independent Energy Consultant, Chairman, HACHP Greece
- Anastasios Tosios, Mechanical Engineer, Deputy CEO, EYDAP
- Alexandros Vrachnos, Chemical Engineer, Independent Consultant
- Dionysios Xenos, Chemical Engineer, Independent Consultant

**\*Following the Partners General Meeting of February 2020, 9 new partners from the broader SE Europe region were elected and include the following:**

- Iosif Iosif, Director, Financial Media Way (FMW), Chairman of the Board, Cyprus News Agency (CNA), Cyprus
- Andreas Petropouleas, Energy Management Director, Elpedison SA, Athens, Greece
- Slavtcho Neykov, Chairman of the BoD, Energy Management Institute, Bulgaria
- Eugenia Gusilov, Managing Director, Romania Energy Center (ROEC), Romania
- Mihailo Mihailovic, Electrical Engineer, Independent Consultant, Serbia
- Prof. Vesna Borozan, Professor, Head of Power Systems Department, Faculty of Electrical Engineering and Information Technologies, University “Sts. Cyril and Methodius”, North Macedonia
- Gökhan Yardım, Partner and Manager, ADG Anadolu Naturalgas Consultancy and Trade Ltd., Turkey
- Dr. Stavri Dhima, Head of Primary Policies Sector, Ministry of Economy Trade and Energy General Policies Directorate
- Dr. Gina Cohen, Lecturer and Consultant on Natural Gas Industry, Israel

### ➤ IENE's Personnel and Associates

The Institute's work is supported by its inhouse staff which consists of administrative and scientific personnel (see Annex I). In addition, IENE's various research and study projects, are supported through the participation by external research associates, particularly from SEE countries.

The Institute's scientific work is further supported by a number of associates who participate in specific projects under the guidance of the Institute's Executive Director and the Chairmen of the Scientific Committees. The tenure of scientific associates and consultants depends on the specific project they have undertaken and the timetable for its implementation.

### ➤ IENE's Scientific Committees

A considerable part of the Institute's scientific work is carried out by the Scientific Committees which oversee a variety of issues. The Scientific Committees constitute advisory bodies which nevertheless play an important role in the operation of the Institute since they are responsible, each in its own field, both for overseeing the work of the Institute as well as for tabling proposals concerning the undertaking of research projects, educational courses, event organisation, as well as other initiatives.

The chairmen of the committees are scientists, engineers, technical experts and executives of established companies with significant professional experience in their field, with most of them being members of IENE's Board of Directors. The members of the Committees are executives of energy companies, organizations and institutions which are corporate members of IENE, but also individual energy professionals from Greece as well as from other countries in SE Europe.

The chairmen of IENE's Scientific Committees for the period of 2018-2019 were the following:

- Christos Dimas, Energy and Geopolitics,
- Costas Theofylaktos, Energy Efficiency
- Andreas Petropouleas, Electricity
- Anastasios Tosios, Natural Gas
- Tereza Fokianou, Hydrocarbons Research and Production (Upstream)
- Liana Gouta, Refinery, Trade and Storage of Petroleum (Downstream)
- Nicholas Sofianos, Renewable Energy Sources

➤ **IENE's Scientific Council**

The Council consists of the chairmen of the Scientific Committees and a number of ex-officio members. The current Chairman of IENE's Scientific Council is IENE's partner, Prof. Pantelis Capros, Director of E3M Lab at the National Technical University of Athens. The Council supervises the work of the Scientific Committees, advises the Institute's management and formulates proposals, where necessary, in order to organize and improve IENE's scientific work.

➤ **Collaboration with other Organisations**

The establishment of contacts with institutions and organizations, research centers and scientific institutes which are active in the energy and environment sectors in South East Europe and beyond, is of particular importance to IENE. The Institute, by maintaining an active presence in SE Europe and internationally, has built relationships of trust and cooperation with other independent institutes and organizations such as the International Energy Agency (IEA), the World Energy Council (WEC), the EC's JRC in Petten (Netherlands), the Energy Community (Vienna), the BBSPA (Bulgaria), the AERS (Serbia), the ROEC (Romania), the BPIE (Belgium), the EPG (Romania), the EIHP (Croatia), the IICEC (Sabanci University / Turkey), The Oxford Institute for Energy Studies (OIES) (UK), the SEA Consulting (Tirana) and others. Through these collaborations, IENE aims at becoming a bridge of communication on energy issues among the South East European countries, by enhancing and supporting the efforts and strategies of businesses and organizations which operate in the broader geographical area of SE Europe and the East Mediterranean.

➤ **International Advisory Board**

The IENE International Advisory Board (IAB) has been established with the participation of well-known personalities of the energy sector at international level who regularly take part in IENE's activities. The IAB advises IENE on issues of international and regional interest and provides support on specific research projects and studies undertaken by the Institute.

Moreover, the IAB has the capacity to make recommendations to IENE, either collectively or individually, for the undertaking of certain actions such as the organization of events, educational activities, scientific / technological visits as well as the carrying out of specific studies and research projects. IAB members interact via e-mail and skype and are regularly informed by the IENE Secretariat of the Institute's activities and progress on various projects. The IAB plenum meets once a year at the SEE Europe Energy Dialogue which is organized by IENE or in other relevant events. IENE's Executive Director, Mr. Costis Stambolis is currently the coordinator of the International Advisory Board.

## IENE International Advisory Board (IAB)

- Prof. Vesna Borozan, Professor, University “Sts. Cyril and Methodius”-Faculty of Electrical Engineering and Information Technologies, **North Macedonia**
- Professor Pantelis Capros, Engineer-Economist, ex-Chairman of RAE, Prof. of Energy Economics, School of Electrical Engineering, NTUA, Director of E3M Lab, **Greece**
- Dr Gina Cohen, Lecturer & Consultant on Natural Gas, **Israel**
- Prof. Stavri Dhima, Head of Primary Policies Sector, Ministry of Economy Trade and Energy General Policies Directorate, **Albania**
- Dr. Leo Drollas, Independent Energy Consultant, **London, UK**
- Prof. Radu Dudau, Co-founder & Director, Energy Policy Group (EPG), **Romania**
- Mr. Vladimir Durovic, Independent Energy Expert, Zagreb, ex General Manager, Plinarco, **Croatia**
- Dr Charles Ellinas, Senior Associate, Atlantic Council **Cyprus – UK**
- Prof. Nicholas Farantouris, Jean Monnet Professor of EU & Energy Law, University of Piraeus, **Greece**
- Dr. Narsi Ghorban, Secretary to the Environment and Energy Commission of the International Chamber of Commerce, Iran Committee, **Iran**
- Ms. Eugenia Gusilov, Director, Romanian Energy Centre (ROEC), **Romania**
- Dr. Hans Hutta, General Manager, ICM, **Austria**
- Dr. Gjermani Ilia, Regulatory & Management, Petroleum Sector, Ministry of Energy, **Albania**
- Fadil Ismajli, CEO, New Kosovo Electricity Company (NKEC), **Prishtina, Republic of Kosovo**
- Prof. Andrey Konoplyanik, Adviser to Director and Professor of International Oil & Gas Business, Gazprom Export and Russian State Gubkin Oil & Gas University, **Russia**
- Mr. Solon Kassinis, Director Kassinis, International Consulting, **Cyprus**
- Prof. Abbas Maleki, Energy Policy, Dpt. of Energy Engineering, Sharif University of Technology, **Iran**
- Prof. Dimitris Mavrikis, Director of KEPA, University of Athens, **Greece**
- Mr. Mihailo Mihailovic, Independent Energy Consultant, **Serbia**
- Mr. Aleksandar Mijuskovic, Executive Director, Coordinated Auction Office in South East Europe, Crnogorski Elektroprenosni, **Montenegro**
- Dr. Amit Mor, CEO, ECO Energy Financial & Strategic Consulting, **Israel**
- Mr. Slavtcho Neykov, President of the Management Board, Energy Management Institute, **Bulgaria**
- Prof. Ionut Purica, Romanian Academy and WEC National Member Committee, **Romania**
- John Roberts, Energy Security Specialist, **Scotland, UK**
- Prof. Osman Sevaioğlu, Electrical Energy Sector Expert, Middle East Tech. University, **Turkey** <sup>†</sup>
- Mr. Nenad Stefanovic, Senior Expert, AERS, **Serbia**
- Dr Mustafa Tiris, General Manager, T Dinamik, **Turkey**
- Mr. Simon Uzunov, Head of Electricity Sector, Energy Community Secretariat, **Vienna**
- Mr. Gokhan Yardim, Partner and Manager, ADG Anadolu Naturalgas Consultancy and Trade Ltd., **Turkey**
- Dr. Yurdakul Yigitguden, Independent Consultant, (former co-ordinator of OSCE Economic and Environment Activities, OSCE), **Ankara, Turkey**
- Dr Katja Yamifava, Senior Research Fellow Oxford Institute for Energy Studies (OIES), **Oxford, UK**
- Mr. Tim Yeo, Chairman New Nuclear Watch Institute, **London, UK**
- Mr. Milan Zdravkovic, Development Sector Director, Srbijagas, **Serbia**

† Passed away in August 2020

## 3. Annual Report 2019



### 3. Annual Report 2019

The Annual Report 2019 refers to the Institute's activities, the work undertaken and the financial performance of the IENE in 2019.

In line with IENE's development strategy, which was fully revised in 2018, the Institute's management over the last 18 months focused its efforts on the following six main areas:

- (i). Upgrading and improving the information sent out, in the form of newsletters or announcements, on a regular basis to its Members, Associates and Partners. The emphasis here has been on the broadening and enrichment of English-language content.
- (ii). Undertaking of research and study projects, on subject areas chosen and highlighted by the Institute following the submission of well-defined and fully documented proposals by the Executive Committee and with the involvement and assistance of the Institute's Scientific Committees.
- (iii). Organization of Conferences and Workshops, and other related events, throughout SE Europe, in order to discuss subjects of common interest and of direct relevance to the region and hence highlight specific issues (e.g. decarbonization, market integration etc).
- (iv). Undertake the organization on a regular basis of high-level educational seminars at senior executive level in order to address pressing market needs.
- (v). Reorganization of IENE's Scientific Committees and the introduction of a new operating framework based on a specialized electronic platform. The ultimate goal is to facilitate the contacts between Committee Members and between IENE's management team and the various committees.
- (vi). Expand the Institute's membership base, by admitting companies and individuals from all different countries in SE Europe and beyond.

#### A. Regular and Occasional Publications

As part of the IENE's overall effort to upgrade and expand its range of publications, the Institute launched a number of new regular and occasional publications. IENE continued throughout 2019, the consistent briefing of its members by sending them regularly, its monthly and weekly publications as well by preparing occasional briefings.

## ▪ Regular Publications

During 2019 the following publications were regularly sent to all IENE members:

- ✓ **Energy Weekly Report:** Issues No. 148 - 195 (January – December 2019)
- ✓ **SEE Electricity Market Analysis:** Issues No. 14 – 61 (January – December 2019)
- ✓ **S.E. Europe Energy Brief:** Market Watch, Monthly Analysis, Market Fundamentals and Prices και Regional Insight. Issues No. 275 – 299 (January –December 2019)
- ✓ **Events Bulletin:** Issues No. 33 – 35 (April – September 2019)
- ✓ **Geopolitics Bulletin:** Issue No. 13 (April 2019)
- ✓ **Electromobility** This IENE newsletter aims to keep its members informed about all the latest developments in the field of the electric mobility in Greece and abroad. Its publication is both in Greek and English, in 2019 the Greek Issue was published and sent in September and the English issue was published and sent on August.
- ✓ **Analysis of the Greek Energy Sector** (in Greek): Issues No. 50 – 111 (January – December 2019)
- ✓ **Energy Issues** (in Greek): Issues No. 151 - 160 (January - December 2019)
- ✓ **Views and Opinions on Energy and the Environment** (in Greek): Issues 21 – 29 (January – December 2019)

## ▪ Occasional Briefings

Within the framework of IENE's efforts to provide accurate information to its members on latest developments, IENE published a number of occasional publications as follows:

- ✓ **News Flashes:**
  - News Flash No. 19 **"Cyprus: ExxonMobil Discovers 3rd Biggest Gas Field in 2 years"**, March 2019
  - News Flash No. 20 **"EU 2050 Climate Target Blocked by Eastern Nations"**, June 2019
  - News Flash No. 21 **"ISIS leader Abu Bakr al-Baghdadi dies in US operation with USA committed in defending oil assets"**, October 2019
- ✓ **IENE Comment:**
  - No. 20 **"Turkmenistan Looks to Gas Expansion"**, February 2019
  - No. 21 **"Istanbul Loss Marks Tectonic Shift for Turkey"**, June 2019
  - No. 22 **"EIB's Decision to Suspend Funding for Fossil Fuels Projects Can Only be Described as Irrational"**, December 2019
- ✓ **IENE Company Profile:**
  - No. 5 **"CENERGY Holdings"**, July 2019

### ▪ New Publication

- ✓ **IENE News**, No. 6 – This latest issue of IENE News, a periodical publication, was also published for the first time in print form.

## B. Studies

### • **IENE Annual Report for 2019 on Greece's Energy Sector (M03)**

The Annual Report on Greece's Energy Sector was completed at the end of 2018 and published in February 2019. The scope of this report, which IENE aspires to publish annually, is to provide a comprehensive overview of the country's energy sector with extensive reference on current and past activities and achievements.

This report provides a well-researched review but also a guideline for energy market developments and prospects in Greece, and also acts as a benchmark for government, banks, companies and professionals involved the energy sector. The first such annual report included Greece's key energy developments in 2017, while also highlighting briefly major energy developments during 2018.

Publication of the report (in Greek) was followed by an English language Executive Summary. (The Executive Summary of the Report in English can be found on the following link: <https://www.iene.eu/articlefiles/executive%20summary%201.pdf>)

### • **Energy Transition of the Island of Kastellorizo (M45)**

In September 2017, IENE embarked on a study project focusing on Greece's southernmost island, Kastellorizo. The study examined the conditions under which Kastellorizo could become energy autonomous taking into consideration environmental objectives and socio-economic development. The study was part of the broader programme of initiatives developed by IENE for the island's energy security and sustainable development. The Kastellorizo energy sustainability study is considered of great strategic importance to Greece and covered issues related to electricity, water, energy efficiency, electrification in transport and high penetration of RES. The non-technical barriers and their removal, as well as the technical constraints for the required 43 applications with the participation of the Prefecture, the local authority and the private sector, were also explored. Overall, the study produced a strategy as well as detailed guidelines in an effort to achieve the island's energy autonomy. The above study was financially supported by PPC Renewables, Hellenic Petroleum (ELPE), HEDNO and Aegean Airlines and was undertaken under the auspices of the Ministry of Environment and Energy. The study was completed in June 2019 and was presented in a special event on October 24, 2019, on the Armed Forces Officers' Club, in Athens. (The Executive Summary of the Study in English can be found on the following link: <https://www.iene.eu/articlefiles/kastellorizo%20executive%20final%20eng.pdf>)

- **Prospects for the Establishment of Gas Trading Hubs in SE Europe (M49)**

IENE completed the above study in mid-November 2019, which was developed on a multiclient basis and presented in a closed meeting between IENE and the participating companies at the offices of the Central European Gas Hub (CEGH) in Vienna. In addition to CEGH, the study was financially supported by Greece's Independent Gas Transmission Operator (DESFA), by the Hellenic Energy Exchange (EnEx) and by MotorOil SA, one of Greece's leading energy companies.

The main purpose of the study is to describe the current situation in the gas markets of Central and Southeast Europe, with the operation of gas trading hubs and energy exchanges. It is worth noting that there is not a single gas trading hub in SE Europe currently in operation east and south of Vienna, with the Central European Gas Hub (CEGH) being a reference point and a basis for promoting gas trading in the region. The study also describes in detail the latest developments in the establishment of gas trading hubs in SE Europe. Based on the latest results of 2018 Annual Scoreboard of European Federation of Energy Traders (EFET), the Hellenic Trading Point (HTP) appears to be on track to become the first gas trading hub in the region, a position expected to be further strengthened through the full operation of the Greek Energy Exchange in June 2020. Other countries that aim to emerge as gas trading hubs in SE Europe include Turkey, Bulgaria and Romania. (A Working Paper of the study is available at: <https://www.iene.eu/articlefiles/working%20paper%20no28.pdf>)

- **Long-Term Gas Contracts (M55)**

Authored by Ms. Gina Cohen, the well-known Israeli lecturer and consultant on natural gas, this study was published by IENE in the summer of 2019. The study focuses on the main characteristics of long-term gas contracts based on the author's experience regarding the general rules and negotiating tactics.

Gina Cohen analyses the Gas Sales and Purchasing Agreements (GSPAs) which serve as a main tool for the division of market risks by means of tying natural gas Sellers and Buyers for a considerable period. Because of the high capital intensiveness and market orientation of gas development, GSPAs have been one of the fundamental tools enabling Sellers to invest in exploration, production and development of gas fields, transporters to promote essential gas transportation infrastructure whether pipelines or liquefaction facilities, and Buyers to invest in consumer facilities, secure in the knowledge that they will have the gas supplies needed for their project's life-span.

The aim of the 146-page study is to present an overview on gas sales and purchasing contracts but also empirically analyse them. The intention, as the author underlines, is not to consider all gas contracting issues, but only the GSPA fundamentals, such as the main terms and definitions, issues of firm volume and flexibility, and some gas pricing issues. The text is supplemented with actual examples and case studies on various aspects of GSPA,

including disputes, standard questions and specialised studies. The research provides both factual data and practical recommendations for both parties of the contract. The study is intended to be a practical tool for both students and individuals involved in GSPA negotiations and drafting. (The full study can be found on the following link: <https://www.iene.eu/articlefiles/Long-Term%20Gas.pdf>)

- **Greece - Cyprus in the New Energy Era – A Special IENE Publication**

This special IENE publication (in Greek) entitled "Greece-Cyprus in the New Energy Era", filled a serious gap in reporting and analysis on energy developments in the wider area of Greece. The publication, which was the result of collective effort, included contributions of eminent experts in the field of energy and geopolitics, aiming to present and highlight the two countries' co-operation in the crucial energy sector in the SE Mediterranean region, at a time of intense challenges. The publication was published in the summer of 2019 and presented in a special event held at the Institute of International Relations of the Panteion University, in Athens, on December 12, 2019. (Further details about this publication can be found at the following link: <https://www.iene.gr/page.asp?pid=5058&lng=1>).

## C. Events

In 2019, IENE organized 13 events in all. Some of them were organized entirely by the Institute whereas other were jointly convened with local organizations and institutes in various countries in SE Europe. More information regarding the particular events can be found on IENE's websites. Members have also access to the proceedings of those events through the relevant microsites with details of each event become available soon after their completion.

For most of the events, and more specifically for the conferences and workshops, special microsites were set up where all addresses and presentations have been uploaded. The list of IENE's 2019 events is as follows:

- **New Year's Celebration, Electra Palace Hotel, 18 – 20 Nikodimou Str. Athens, Monday, January 14, 2019 (18:30)**
- **Presentation of IENE's 2019 Annual Report on Greece's Energy Sector, Divani Caravel Hotel, 2 Vassileos Alexandrou ave., Athens, Wednesday, February 13, 2019 (11:30 – 15:00)**
- **Roundtable meeting on the " The Geopolitics of Energy Transition", (part of IENE's Energy Transition Roundtable Meetings), Ministry of Foreign Affairs (auditorium), Athens, Tuesday, March 5, 2019 (For further details, please visit the following link: <https://www.iene.eu/en/congress/15/2nd-iene-colloquium-on-the-geopolitics-of-energy-transition?p=79> )**

- One day conference on the **“Challenges and Opportunities in Greece’s Electricity Market”**, **Divani Caravel Hotel, 2 Vassileos Alexandrou ave., Athens**, Thursday, May 9, 2019 (For further details, please visit the following link: <http://www.iene.eu/el/congress/16/oi-prokliseis-stin-leitourgia-tis-agoras-ilektrikis-energeias>)
- INNOPATHS Workshop on: **“Towards carbon neutrality, the perspective of investors”** organized by E3 Modeling in partnership with IENE **Electra Palace Hotel, 18 – 20 Nikodimou Str. Athens**, Wednesday 15 May 2019 (16: 00-19: 00)
- IENE Regional Conference **Vienna Energy Transition Forum”**, in co-operation with **Energy Centre Europe, Vienna**, Thursday - Friday, June 6 - 7, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/17/vienna-energy-transition-forum>)
- **“Hydrocarbons in SE Mediterranean”**, in co-operation with the Technical Chamber of Greece (TEE), Athens, Tuesday, June 18, 2019 (For further details, please visit the following link: <https://web.tee.gr/eidisis/oi-ydrogonanthrakes-stin-anatoliki-mesogeio-oi-technika-arties-lyseis-eggyisi-gia-anaptyxi-kai-apotelesmatiki-prostasia-toy-perivallontos/>)
- One day conference on **“East Mediterranean: The new natural gas frontier”**, in cooperation with the **Energy Institute, London**, Monday, October 7, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/21/east-med>)
- Regional Workshop **“Energy Transition and Investment Challenges in SE Europe”**, in co-operation with ROEC, Bucharest, Romania, Wednesday, October 16, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/23/energy-transition-in-se-europe-policy-and-investment-challenges>)
- Presentation of IENE’s Study on the **“Energy Transition of the Island of Kastellorizo”**, Armed Forces Club (LAED) (Rigillis 1 & Vassilissis Sofias (Pavlou Mela Square), 10675), Athens, Thursday, October 24, 2019, 11:00 – 13:00
- **24<sup>th</sup> National Energy Conference “Energy and Development 2019”**, Athens, Thursday – Friday, November 21 – 22, 2019 (For further details, please visit the following link: <https://www.iene.eu/el/congress/19/energy-and-development-2019?p=116>)
- **7<sup>th</sup> Cyprus Energy Symposium**, in co-operation with **FMW, Nicosia**, Thursday, December 5, 2019 (For further details, please visit the following link: <http://www.iene.eu/el/congress/24/7o-energeiako-symbosio-cyprus>)

- Presentation of IENE's Special Publication on «Hellas – Cyprus, in the New Energy ERA», **Institute of International Relations (IIR), Athens**, Thursday, December 12, 2019, 17:00-19:00

#### D. Scientific Committees

IENE's Scientific Committees have contributed significantly in the work of the Institute throughout 2019, through targeted interventions and the preparation and submission of well-researched proposals. The Committees met throughout the year as follows:

The **Energy Efficiency Committee** met once (24/9) under the chairmanship of Costas Theofylaktos. The Committee focused on the organization of the Conference on “Investing in Energy Efficiency”, to be held at the Eugenides Foundation, in early 2020. A number of meetings followed in small groups involved in various projects.

The **RES Committee** convened twice (12/6 and 10/8), under the chairmanship of Nickolas Sofianos. The Committee focused on latest technological developments and also on the legal framework of RES and the need to simplify and streamline current licensing procedures. The committee tabled specific proposals and contributed to IENE's participation in the public consultations organized by the government.

The **Downstream Hydrocarbons Committee** convened twice (10/7 and 26/10), under the chairmanship of Liana Gouta, once at the HELPE Headquarters and once at IENE's Deputy Chairman's Offices, KG Law Firm, respectively. The Committee focused on latest developments in the downstream sector and on the actions that could be undertaken by the Committee in order to assess the impact of Climate Change policies to the sector.

The **Natural Gas Committee** met in small individual groups on several occasions throughout 2019 and reviewed a number of projects.

The **Upstream Committee** met in small groups on several occasions throughout 2019 and debated specific issues.

The **Geopolitics Committee** convened twice (24/1 and 1/10) under the chairmanship of Christos Dimas. The Committee focused on analyzing the latest geopolitical developments and in the preparation of a special “Geopolitics” Bulletin.

The **Electricity Committee** convened only once (9/12) under the chairmanship of Andreas Petropoulos, at IENE's Deputy Chairman's Offices, KG Law Firm. The only topic of the meeting was the exchange of views on Greece's new NECP with the aim of formulating comments and thus contribute to the public consultation process. The meeting was also attended by some of the chairmen of the other Scientific Committees and members of IENE's Executive Committee. Following the meeting IENE's scientific team formulated the Institute's remarks in a special document which was submitted to the Ministry of



Environment & Energy as part of the public consultation process for the revision of the relevant RES legal framework.

## E. Executive Committee

The **Executive Committee** of IENE convened three times under the chairmanship of John Chadjivassiliades and three more times under the new chairmanship. Following the elections of June 2019 during the 30<sup>th</sup> AGM of Partners, the new Executive Committee which emerged included the following:

- Chairman & Executive Director: Costis Stambolis
- Deputy Chairman: Gus Papamichalopoulos
- Secretary General: Costas Theofylaktos
- Members: Dionysios Xenos, Christos Dimas, Thomas Lamnides, Anastasios Tosios

Detailed minutes of the aforementioned meetings were held and are available, through which all IENE partners have been informed. In total, IENE's Executive Committee met six times in 2019.

## F. Visits, meetings and IENE's participation in Conferences and Events organized by Third Parties

During the period from January 2019 – December 2019 and upon invitation of the organizers, IENE actively participated in several international and local meetings, conferences and events as follows:

- **Costis Stambolis, Chairman and Executive Director, IENE participated in the following events:**
  - **12<sup>th</sup> Annual European Gas Conference 2019** and spoke on the: «The Case for a Gas Trading Hub in SE Europe», January 28-30, 2019, Vienna, Austria
  - He was moderator of the Conference on «**Small Hydroelectric Projects: Challenges and Prospects in the New Energy Market**», organized by the Hellenic Small Hydropower Association (HSHA), Sunday, February 17, 2019, Athens, Greece
  - **International Petroleum Week 2019**, Energy Institute, February 26-28, 2019, London, UK
  - **25<sup>th</sup> Flame Conference**, where he spoke on: "The Expanded South Gas Corridor", May 13 – 15, 2019, Amsterdam, Netherlands
  - **26<sup>th</sup> International Caspian Oil & Gas Conference**, on: "South Corridor Opens Up New Energy Markets in SE Europe", May 30- 31, 2019, Baku, Azerbaijan



- **Conference on:** “Investing in Green Energy: Energy Saving - New RES Projects”, July 15, 2019, Hotel Athens Divani Caravel, Athens, Greece
  - **20th Symi Symposium** on “Democracy And Power – From Hybris To Nemesis”, July 7 – 11, 2019, Crete, Greece
  - **WindMission Greece 2019 Conference**, “The Role of IENE in the Development of RES in Greece”, October 14 – 15, 2019, American College of Greece (Deree), Athens, Greece
  - **World Bank’s Workshop** on Decarbonization, held in Athens, October 30, 2019
  - **New Nuclear Watch Institute Conference**, where he presented on "Nuclear Energy as Part of Europe’s Energy Mix", November 5, 2019, London, UK  
Presentation on: "Decarbonising SE Europe and the Role of Nuclear Energy"
  - **Evening Event of the Trikala Cultural Club** on “Greece's Energy Wealth”, December 10, 2019, Trikala, Greece  
Presentation on: “The Role of Hydrocarbons in the Economy and National Security”
  - **4<sup>th</sup> Annual Conference:** «The Political Phenomenon in Transition: Challenges for Democracy, the State and Society», organized by the University of Peloponnese, December 13-15, 2019, Club Hotel Casino Loutraki, Loutraki, Greece  
Presentation on: "Turkey's rising energy needs and their regional impact"
- **Costas Theofylaktos, Secretary General & Chairman of IENE Energy Efficiency Committee**, *participated in the following event:*
- **4th IEA Global Conference on Energy Efficiency**, an International Energy Agency (IEA) high-level conference, June 24 – 25, 2019, Dublin, Ireland
- **Dimitris Mezartasoglou, IENE’s Head of Research** *participated in the following Conferences:*
- **25<sup>th</sup> Annual BBSPA Conference**, on: “The Case for a Gas Trading Hub in SE Europe”, April 4 – 5, Bucharest, Romania
  - **4<sup>th</sup> Iraqi – European Business and Investment Forum**, on: «Greece’s Energy Expertise and Investment Prospects», July 10-11, 2019, Athens
  - **Joint ROEC/IENE Event**, on: “Prospects for the Establishment of Regional Gas Trading Hubs”, October 16, 2019, Bucharest, Romania
- **Alexandros Perellis, IENE’s Research Associate**, *participated in the following Conferences:*

- **Conference on “ The clean energy package and energy investments – Realities and challenges”**, Panel discussion on «The Status of the Investment Process at a Regional and National Basis through the Prism of Energy Investments Regime and the Major Open Issues in this Regard, including terms of climate change», April 4- 5, 2019, Stara Zagora, Bulgaria
  - **RAE's Event** on "Non-Interconnected Islands and Innovations in the Electricity Market" in the Context of the 84<sup>th</sup> Annual Thessaloniki International Trade Fair, September 10, 2019, Thessaloniki, Greece – Presentation on “Energy Transition of the Island of Kastellorizo”
  - Conference on **«European Forum on Clean Energy for Islands»**, RAE, October 3 – 4, 2019, Rodos Palace Hotel, Rhodes, Greece  
Presentation on “Energy Transition of the Island of Kastellorizo”
- **Alina Gourgioti, IENE’s Knowledge Officer, participated in the following event:**
- **Energy Transitions 2019 Conference**, Chatham House, March 18, 2019, London, UK
- **John Chadjivassiliades, IENE’s past Chairman and Member of BoD, participated in the following event:**
- **Conference** on «Small Hydroelectric Projects: Challenges and Prospects in the New Energy Market», Hellenic Small Hydropower Association (HSHA), Sunday, February 17, 2019, Athens, Greece

## G. National Council for Energy and Climate (NECP)

Upon the invitation of the Secretary General of the Ministry of Environment and Energy, Mr. Michalis Veriopoulos and on the basis of a ministerial decree (see Official Government Gazette 28/12/2017, Issue, 204) the Executive Director of IENE Costis Stambolis participated as an energy expert, in the work of the National Council for the Energy and the Climate (NECP). The participation of Costis Stambolis as an energy expert in the above Committee helped IENE gain an insight into EC’s energy strategy formulation exercise. The first submission of the National Plan to the EU took place at the end of January 2019, while the NECP continued its work, under the new government and with a new composition (September 2019), with Costis Stambolis (following a decision by the Ministry and upon the invitation of the new Secretary General, Ms. Alexandra Sdoukou) retaining his seat in the new Committee. Following a thorough revision, the new NECP was resubmitted to the EU at the end of December 2019.

Within the framework of NECP’s work, IENE prepared and submitted two specialized studies, as follows:

- (a) “The Energy Security of Greece and Proposals for its Improvement” (M51), and

(b) “Prospects for the Electric Vehicle Market in Greece and SE Europe and Business Opportunities” (M47)”.

The aforementioned studies formed the basis for an extended dialogue within the NECP on energy security, the role of hydrocarbons in the country’s energy mix and the proposals for large scale introduction of electric vehicles.

#### **H. Participation of IENE in Public Consultations**

- **RAE’s Public Consultation on the streamlining of RES licensing procedure, September 27, 2019**

IENE welcomed RAE’s initiative to institute a public consultation with the view of simplifying and streamlining the licensing procedures for RES production. More specifically, RAE’s attempt was to simplify certain procedures in an institutional context which has been characterized by complexity and bureaucracy in all stages. The proposed changes may ease RAE’s burden, but this is not expected to solve the accumulated problems of the RES institutional framework, which include immature technologies. IENE carefully considered the questions posed by the Public Consultation and then submitted relevant comments on the subject. (Further details can be found on the following link: <https://www.iene.gr/page.asp?pid=5062&lng=1>)

- **Public Consultation by the Ministry of Environment and Energy concerning the draft law on: “Energy Market Liberalization, PPC’s Modernization, Public Gas Corporation’s (DEPA) Privatization and the Support of RES”, December 3, 2019**

IENE participated in the public consultation held by the Ministry Environment and Energy on the drafting of a law concerning the further liberalization of energy markets, the modernization of PPC, the privatization of DEPA and the support for RES.

IENE, aspiring to contribute to the creation of a well functioning and efficient institutional framework in this area, contributed to this public consultation by submitting comments on specific articles in the draft law. (Further details can be found on the following link: <http://www.opengov.gr/minenv/?p=10101>)

- **Public Consultation by the Ministry of Environment and Energy concerning the National Energy and Climate Plan (NECP), December 16, 2019**

In the context of the public consultation for Greece’s National Energy and Climate Plan (NECP), IENE submitted detailed comments and observations on NECP’s draft text. Following a thorough examination and analysis of the proposed plan in collaboration with the chairmen of the Institute’s Scientific Committees as well as staff members, the Institute submitted its comments on December 16. IENE’s general suggestions focused on the need

to introduce tangible measures for RES objectives instead of the broad guidelines which appear in NECP, proposing that a more extensive reference is made on liquid fuels and natural gas through the addition of separate subsections in the NECP as well as highlighting the importance of operational research and implementation plans, especially with regard to the extension and upgrading of electricity grids that will help achieve the objective of high RES penetration.

Earlier, on December 9, a special meeting between the chairmen of the Institute's Scientific Committees as well as the Electricity Committee took place, and was chaired by Andreas Petropouleas, head of IENE's Electricity Committee. The meeting was dedicated on the discussion of the NECP thus assisting IENE's management in the formulation of the Institute's response. (Further details can be found on the following link: <https://www.iene.eu/iene-actively-participated-in-the-public-consultation-for-greeces-national-energy-and-climate-plan-p5439.html>)

- **Public Consultation by the Ministry of Environment and Energy concerning Long-Term Energy Planning, December 19, 2019**

IENE participated in the public consultation held by the Ministry Environment and Energy on shaping the country's long-term energy planning. IENE, wishing to contribute to the effort to formulate a functioning and efficient institutional framework in the energy sector for the Long-Term Energy Planning for 2050, contributed to this specific public consultation with comments and suggestions on draft articles. Th comments on the Public Consultation were compiled after a meeting of the Institute's Executive Committee and the Chairmen of the IENE Scientific Committees. (Further details can be found on the following link: <http://www.opengov.gr/minenv/?p=10174>)

## **I. New IENE members**

A number of well-known companies operating in the broad SEE energy sector, joined the Institute as corporate members during 2019. Eight new companies in total, including important consulting and construction firms operating across SE Europe, joined IENE during 2019. IENE's new corporate members are as follows:

- **ENERTA (Commercial and Service Company)**, (<https://www.enerta.gr/>)
- **Grant Thornton Greece**, (<https://www.grant-thornton.gr/>)
- **TAP (Trans Adriatic Pipeline AG)**, (<https://www.tap-ag.gr/>) (Switzerland)
- **VOLTON SA**, (<https://volton.gr/>)
- **National Natural Gas System Operator (DESFA) S.A**, (<https://www.desfa.gr/>)

- **ELINOIL – Greek Petroleum Company SA,** (<https://www.elin.gr/>)
- **VTT Vasiliko Ltd, (Cyprus)** (<http://www.csrcyprus.org.cy/el/page/home>)
- **AES Bulgaria,** (<http://aes.bg/?lang=en>)

Membership of the aforementioned companies in IENE not only strengthened its membership base but also enhanced the prospects for expanding its work programme, while at the same time it constitutes a recognition for its high level work and services offered (to its members and to the energy community at large). The addition of new members especially companies, is a positive sign and helps in the further development of the energy sector in of SE Europe.

## J. Financial Results

The Institute's total revenue for 2019 was higher than that of 2018. More specifically, total income for 2019 amounted to €357.336,36, (€ 278.200,64 in 2018), while the operational costs were €356.399,84 (€259.526,72 in 2018). As a result, there was a net positive difference between income and expenditure amounting to € 79.136. The reported profit following tax deductions, management costs and other liabilities was € 936,52.

The following table (Table 1) shows the income statement for financial years 2017 – 2019, while Figure 1 and Figure 2 show the revenue and expenditure analysis for 2019.

**Table 1 – Total Revenue -Expenditure 2019**

		2019	2018	2017
Revenue	Net Value	357.336,36	278.200,64	282.090
	VAT	85.706,40	65.383,36	63.220
	<b>Total</b>	<b>443.042,76</b>	<b>343.584</b>	<b>345.310</b>
Expenses	Net Value	356.399,84	259.526,72	275.647,11
	VAT	34.282,99	25.802,28	25.280,62
	<b>Total</b>	<b>390.682,83</b>	<b>285.329</b>	<b>300.927, 73</b>

Table 2 - Revenue Analysis 2017-2019

	2019	2018	2017
<b>Membership Fees</b>	98.266,36 (27%)	93.753,4 (33,7%)	86.510 (30.7%)
<b>Book Sales</b>	—	278,00 (0,0153 %)	10.110 (3.5%)
<b>Conferences (Sponsorship &amp; Registrations)</b>	117.470 (33%)	141.604 (50,9%)	158.710 (56,3%)
<b>Studies</b>	91.500,00 (26%)	42.564,6 (15,3%)	26.760 (9.5%)
<b>Seminar Registrations</b>	50.100,00 (14%)	—	—
<b>Total Revenue</b>	<b>357.336,36</b>	<b>278.200</b>	<b>282.090</b>
<b>VAT</b>	<b>85.706,40</b>	<b>65.383,36</b>	<b>63.220</b>
<b>Total</b>	<b>443.042,76</b>	<b>343.584</b>	<b>345.310</b>

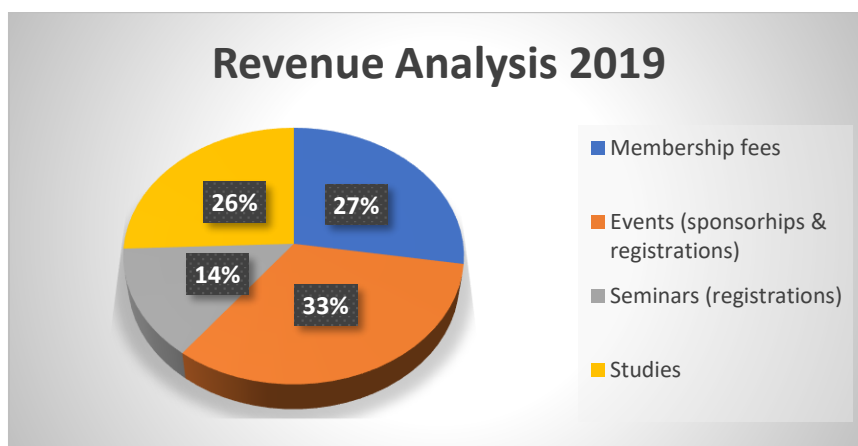


Figure 1. Revenue Analysis 2019

Table 3 - Expenditure Analysis 2019

	2019	2018
Service Public Utilities	13.802,30	14.027,36
Office Operating Expenses	24.615,48	22.182,28
Salaries, Insurance Contributions etc.	78.201,81	76.141,56
Consulting Fees to Associates	59.940,86	43.220,10
Organizational expenses for conferences etc, and travel costs	179.839,39	103.955,42
<b>Total Expenditure</b>	<b>356.399,84</b>	<b>259.526,72</b>
VAT	34.282,99	25.802,28
<b>Gross Expenditure</b>	<b>390.682,83</b>	<b>259.526,72</b>

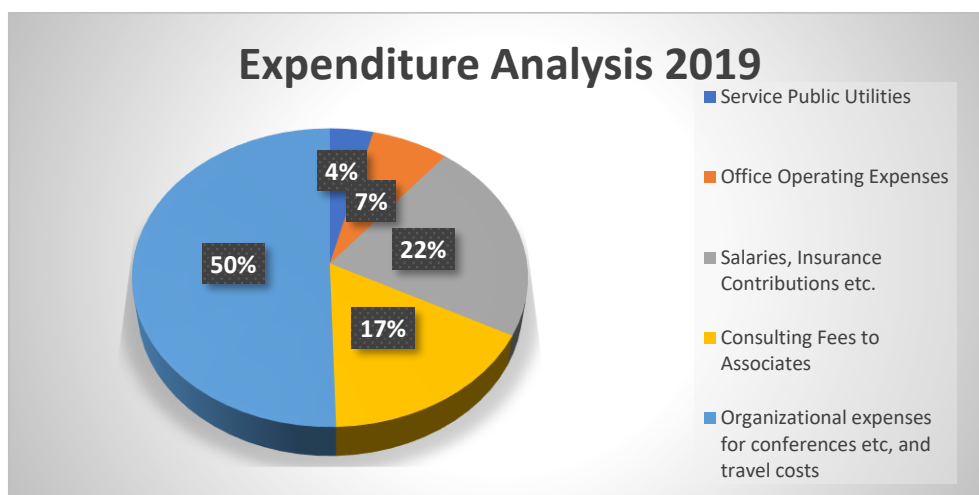


Figure 2. Expenditure Analysis 2019

## 2019 Balance Sheet

The financial statement (balance sheet) for 2019 provides the opportunity for some useful observations regarding IENE's financial activity for the past year.

- (a) Total revenue for 2019 reached € 357.336,36 which was 28.5% higher than the income registered for 2018.
- (b) The revenue originating from membership fees represents an increase of €4.512,96 compared to 2018. This is mostly justified by the renewal of membership by IENE corporate members from both Greece and other countries in SE Europe as well as the registration of new ones. The revenue originating from membership fees for 2019 represents 27% of the total IENE's income as compared to 33,7% for 2018. This is understandable because 2019 total income was much higher compared to 2018.
- (c) There has been an important increase in the 2019 revenue from fees related to research and studies thanks to work that has been undertaken by the Institute regarding topics that the Institute had proposed to certain corporate members. The main studies undertaken were the following:
  - (i) Prospects for the Establishment of Gas Trading Hubs in SE Europe (M49), the study was undertaken by IENE and was funded by the Motor Oil Company, the Hellenic Energy Exchange, the Hellenic Gas Transmission System Operator (DESFA) and the Central European Gas Hub
  - (ii) "Energy sufficiency of Kastellorizo Island" (M45), the study was undertaken by IENE and was funded by PPC Renewables S.A, HELPE, HEDNO and Aegean Airlines.

The total revenue originating from studies reached €91.500. This corresponds to an increase of 114,98% compared to the corresponding amount for 2018.

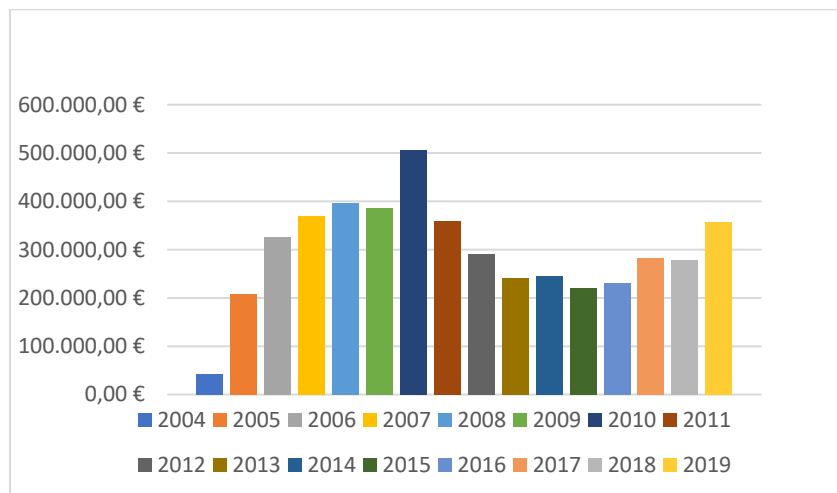
- (d) IENE's revenue originating from event sponsorship (conferences, seminars, workshops) was at a little lower level compared to 2018, and stood at €117.470, thus contributing 33% of the total amount of IENE's revenue.
- (e) IENE's expenditure in 2019 increased by about 37,3% compared to the corresponding amount of 2018. This was most evident in the area of event organization, where the Institute undertook the organization of several events in Greece and abroad either by itself or jointly with other organizations/institutes. The expenditure for 2019 amounted to a total €356.399,84, including salaries, insurance, consulting fees, payroll taxes, public levies, consulting fees to research associates, accountant's fees, travel expenses, conference room rental fees, hospitality fees, page layout of publications and creation and maintenance of



electronic sites, office rental, repair and maintenance, building maintenance costs, (such as electricity, water and telephone bills), and miscellaneous expenses (i.e. office maintenance, travel expenses).

### ***IENE Income Analysis 2004 - 2019***

IENE has already completed 16 financial years. At this point it is of interest to see a revenue analysis for the particular period as shown in Figure 3 covering the 16-year span of IENE's operation.



*Figure 3. Income Analysis 2004-2019*

	2019		2018			2019	2018
<b>Non-Current Assets</b>	Acquisition Value	Depreciation	Net Book Value	Acquisition Value	Depreciation	Net Book Value	
Property, plant and equipment							
Other tangible assets	36,079.44	9,516.61	26,562.83	36,079.44	9,516.61	26,562.83	20,000.00
Property, plant and equipment	36,079.44	9,516.61	26,562.83	36,079.44	9,516.61	26,562.83	20,000.00
<b>Intangible assets</b>							
Financial assets							
Non-Current Assets	36,079.44	9,516.61	26,562.83	36,079.44	9,516.61	26,562.83	24,244.17
<b>Current Assets</b>							
Inventories							24,244.17
Financial assets and Advances							
Trade receivables			18,883.20				24,667.54
Cash and cash equivalents			6,435.26				4,920.35
Financial assets and Advances	0.00	0.00	25,318.46	0.00	0.00	29,587.89	
Current Assets	0.00	0.00	25,318.46	0.00	0.00	29,587.89	5,415.44
<b>Total</b>	36,079.44	9,516.61	51,881.29	36,079.44	9,516.61	56,150.72	5,415.44

### INCOME STATEMENT

	2019	2018
<b>Earnings after tax</b>		
Earnings before tax		
Earnings before interest and tax		
Gross earnings		
Turnover (Net)	357,336.36	278,200.64
Gross earnings	357,336.36	278,200.64
Administrative Costs	-356,399.84	-259,526.72
Earnings before interest and tax	936.52	18,673.92
Earnings before tax	936.52	18,673.92
Earnings after tax	936.52	18,673.92
<b>Total</b>	936.52	18,673.92

Table 4: Balance Sheet for 2019 Financial Year

## 4. Information provided to Members

## 4. Information provided to Members

One of the most important activities of IENE is the regular and consistent dispatch of information to members in the form of newsletters and bulletins. The following is a list of IENE regular publications which are sent to all members regarding the developments in the energy sector in SE Europe and beyond.

### In English

- (1) IENE Weekly Energy Report (weekly)
- (2) South East Europe Electricity Market Analysis (weekly)
- (3) South East Europe Energy Brief
  - South East Europe Energy Market Watch (monthly)
  - South East Europe Energy Market Insight (occasional)
  - South East Europe Energy Monthly Analysis (monthly)
  - Energy Market Fundamentals and Prices (bimonthly)
- (4) Energy & Geopolitics Bulletin (quarterly)
- (5) Events Bulletin (quarterly)
- (6) Country Updates (occasional)
- (7) Briefing Notes (occasional)
- (8) Research Notes (occasional)
- (9) Electric Mobility Update (quarterly)
- (10) IENE Comment (occasional)
- (11) News Flashes (occasional)
- (12) IENE Company Profiles (occasional)
- (13) IENE News (occasional)

### In Greek

- (1) Energy Market Analysis Bulletin (weekly and monthly)
- (2) Energy Issues (monthly)
- (3) Views and Opinions on Energy and the Environment (monthly)
- (4) Electromobility/Electric Vehicles Review (occasional)

### \*New planned IENE publication in English

SE Europe Gas Markets (monthly)

In the following pages sample pages of the aforementioned publications are shown.

## IENE Newsletters

### IENE Newsletters

In the following section selected pages from some of the newsletters that were sent to IENE's members in 2019 are shown. The preparation and dispatch to IENE Members on a consistent basis, of a whole series of newsletters, constitutes a core Institute activity.

February 07, 2019 - Issue No 153


### IENE Energy Weekly Report

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◆ **Global and Regional Developments**

**As Greek PM Visits Turkey, Erdogan Calls for Peacefully Resolving Disputes**



Greek Prime Minister Alexis Tsipras concluded his visit to Turkey on Wednesday (06/02) with no deal to settle any of the disputes between the rival nations. But both he and President Recep Tayyip Erdogan sent unusually positive signals of their aim to improve ties. "The president told me that we have nothing to sign today, but he added that maybe we will have the next time we meet," Tsipras told reporters at the press conference with Erdogan, the spike of the occasions when he has managed to de-escalate confrontations by calling Erdogan, and that Erdogan always took the call.

For his part, Erdogan said "a politician's job is not to win enemies but friends." Erdogan said they had discussed improving transport links such as a ferry service between Izmir and Thessaloniki, and a high-speed train between Istanbul and Thessaloniki, and the two leaders agreed to meet later this year in Thessaloniki, the northern Greek town where Atatürk was born.

Tsipras said the two countries had agreed to reduce tension in the Aegean Sea and proceed with confidence-building measures, but he did not give details.

IENE Energy Weekly Report February 07 - Issue No 153



Figure 1: ICE Brent Crude Oil (11 January - 07 February 2019)

On the central bank front, the Fed's statement from its recent FOMC meeting took another step in the dovish direction remarking the committee would remain patient in the pursuit of higher interest rates. The overall language of the note took a more accommodative look at employment and inflation trends and seemed increasingly in tune with the idea that the economy needs to be able to rise further before policymakers apply the brakes of higher rates. The bankers also noted that they would take slow approach in deciding on whether to continue shrinking their balance sheet. (Our assessment is that Fed balance sheet tightening was a critical driver of stock market and oil price weakness in H2 18.) US Fed officials could ultimately play an important role in shaping oil prices in 2019 and for now they're clearing the path to higher prices. This could become especially true if US government shutdown, US/China trade or Brexit contagion rise as the central bank could swing even more dovish and work to push asset prices higher.



Figure 2: ICE Brent Crude Oil (11 January - 07 February 2019)

December 26, 2019 - Issue No 195


### IENE Energy Weekly Report

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◆ **Global and Regional Developments**

**Climate Change Conference Ends in Disappointment**



The 25th UN Climate Change Conference (COP25) disappointed expectations with its final decision released on December 14 after protracted negotiations among participating delegations. Talks were extended two days for the representatives of 197 UN member countries to agree on a final statement after official meetings of the COP25 on December 2-13.

Countries with different approaches to fighting climate change were unable to overcome differences in national interests over the distribution of global carbon emissions, environmental integrity and financing. The only notable article of the final declaration was the emphasis on reducing the gap between member countries' carbon emissions by 2030. Many environmental organizations describe COP25 as "a disappointing summit" and "below expectations".

The climate conference had been set to take place in Santiago, Chile, but was moved to Spain's capital Madrid due to the unrest in the Chilean capital Santiago. The COP25 Summit is being held as a run-up to the COP24 in Katowice city of Poland next year.

**Coal Pollution in the Western Balkans Is a European Problem**

Pollution from 16 coal plants in the Western Balkans is responsible for 3,900 premature deaths and 6,000 cases of bronchitis in children every year across Europe, from Serbia to Greece and Germany. Air pollution knows no borders: it affects not only people in the Western Balkans but across Europe too. People in the Western

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designed to cut carbon emissions, filling a void left by the administration of Donald Trump, who notoriously eschewed global warming as a "hoax".

But some of the cut capacity has shifted abroad to developing countries, particularly in countries formally partnering with China's Belt and Road Initiative. In the past four years, the Chinese steel industry, a coal-consuming sector, has funded 300 tonnes of annual capacity in new steel projects in Indonesia and Malaysia, according to a FT analysis last year, equivalent to more than 40 per cent of steel consumption in 2016. Chinese bankers and project planners like coal-based projects because they are cheap. While they are restricted by Chinese pollution and emissions targets at home, they are free to fund coal-based projects abroad. "They see the long-term financial, environmental and health consequences of these projects as the responsibility of the other side," said IENE's Mr Brown. Chinese funding for coal projects is especially evident in south and south-east Asia, where energy demands are growing quickly. Last year, Chinese institutions committed or offered to finance 13.6GW of coal-fired capacity in Bangladesh, for example, equivalent to just under 90 per cent of Bangladesh's power capacity. According to the US Department of Energy, 50GW can power about 8,000 compact electric vehicles. "Chinese investment has the potential to shape south-east Asia, but in doing so, it must invest in clean renewable energy, not weigh us down with dirty coal," said Khanh Nguy Thi, director of Vietnamese environmental organisation GreenV.

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Public Power Corporation S.A. - Hellenic Energy Group

**IENE - Energy Weekly Report**

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Issue No. 5, July 22, 2019

## IENE Company Profile



### General Overview

Based in Belgium, Cenergy Holdings was founded in 2016 and is listed on Euronext Brussels and the Athens Stock Exchange (ATHEX). Cenergy Holdings is a subsidiary of Viohalco S.A., a holding company of several leading metal processing companies across Europe. Viohalco's subsidiaries specialise in the manufacture of aluminium, copper, cables, steel and steel pipes products and technological advancement. They have production facilities in Greece, Bulgaria, Romania, Russia, North Macedonia, Turkey, the Netherlands and the United Kingdom.

Although a fairly young company in terms of corporate identity, Cenergy Holdings consists of well-established and experienced operational units with long track record. The Cenergy Holdings portfolio consists of companies positioned at the forefront of high growth sectors, such as energy transfer, telecommunications and construction. They have a strong financial position, a track record of success and a promising future. These include:

- Corinth Pipeworks (CPW), a world leader in steel pipe manufacturing for the oil and gas sector and major producer of hollow sections for the construction sector.
- Cable® Hellenic Cables Group, one of the largest cable producers in Europe, manufacturing power and telecom cables for various sectors, including oil and gas, renewables, energy transmission and distribution, construction and telecommunications.

The "IENE Company Profile" is an occasional communication published by the Institute of Energy for SE Europe in its effort to broaden the dialogue on current energy issues of regional and global interest. A Company Profile, as the name implies, focuses on a particular company engaged in one or more areas of activity in the broad energy field. The scope of the "Company Profile" is to focus on the achievements and plans of prominent energy companies and organizations which through their work paradigm could provide inspiration for leadership, strategy and innovation. Material used for a Company Profile may come from published sources but also from original input contributed by IENE's staff and research associates.

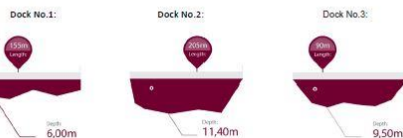
1



Issue No. 5, July 22, 2019

Thisvi port is a well-organized port providing accuracy of operations and safety for both people and products. The port is equipped with the necessary equipment such as dock and harbor cranes, forklifts etc.

The port has three docks:



(a) Cable® Hellenic Cables Group

Fulgor - Corinth port - Greece

The Fulgor plant in Corinth offers direct loading on cable-laying vessels from its own dock facilities. The port is able to accommodate all cable-laying vessels currently in operation.



Hellenic Cables - Inofyta - Greece

The Inofyta compound plant is located in Inofyta-Viotia, Greece and is Hellenic Cables' supporting facility for the production of PVC and rubber compounds. Its total annual production capacity is 24,000Tn.

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August 20, 2019 Issue No 291 - JULY-AUGUST 2019

## SOUTH-EAST EUROPE ENERGY BRIEF Market Fundamentals & Prices

Published by the Institute of Energy for South East Europe



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### Part 1 - Oil

#### Economic Woes Hold Sway Over Geopolitics

While geopolitical tensions in the Middle East Gulf remain high, with US sanctions recently extended to more Iranian officials and a Chinese oil importer, as well as another tanker seizure, oil prices (Brent) have eased back from the most recent high of \$67/Bbl. Shipping operations are at normal levels, albeit with higher insurance costs. The messages from various parties that vessels will be protected to the greatest extent possible, and the IEA's recent statement that it is closely monitoring the oil security position in the Strait of Hormuz will have provided some reassurance.

There have been concerns about the health of the global economy expressed in recent editions of IEA's Oil Market Report and shown by reduced expectations for oil demand growth. Now, the situation is becoming even more uncertain: the US-China trade dispute remains unresolved and in September new tariffs are due to be imposed. Tension between the two has increased further this week, reflected in heavy falls for stock and commodity markets. Oil prices have been caught up in the retreat. In its latest Oil Market Report, IEA took into account the International Monetary Fund's recent downgrading of the economic outlook: they reduced by 0.1 percentage points for both 2019 and 2020 their forecast for global GDP growth to 3.2% and 3.5%, respectively.

Oil demand growth estimates have already been cut back sharply: in 2019, IEA saw an increase of only 0.6 mb/d, with China the sole source of significant growth at 0.5 mb/d. Two other major markets, India and the United States, both saw demand rise by only 0.1 mb/d. For the OECD as a whole, demand has fallen for three successive quarters. As the IEA notes

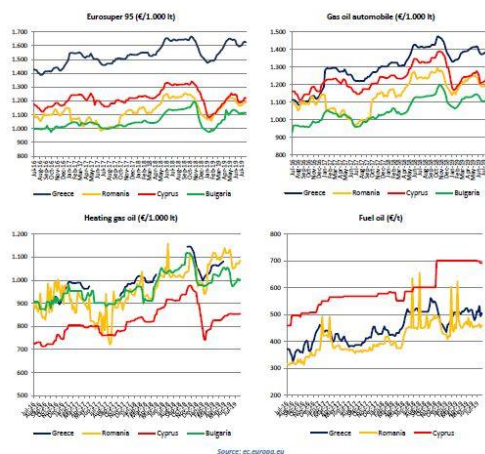
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## SOUTH-EAST EUROPE ENERGY BRIEF Fundamentals & Prices

Issue No 291 - July-August 2019

Figure 19 - Oil products prices: Greece, Romania, Bulgaria, Cyprus




Source: ec.europa.eu

2




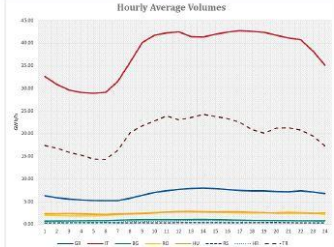
IENE GEOPOLITICS BULLETIN		Issue No 13- April 2019
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<b>Global Economy</b>		
As it is becoming increasingly apparent from several economic indicators, the forecasts for the global economy for 2019 are rather bleak. The present Bulletin examines parameters that affect the global economy, giving particular emphasis on China-US trade relations, while the link between the global economy and the international political scene is explored through the challenges posed by the latter.		
<b>Europe</b>		
For the first time since its founding (60 years ago), the EU is facing a number of serious challenges. The further obstacles that the Union is expected to come across are analyzed and special mention is made on the role played by Germany and its relationship with France. Brexit, the North-South differences and the general contradictions between European countries, as well as the introversion that is observed in many EU countries over the last five years.		
<b>Middle East</b>		
The bulletin also discusses the consequences of the withdrawal of US troops from Syria while analyzing Turkey's actions in the region with emphasis on the Kurdish issue. The relationship between Iran and Iraq is also discussed in the light of the recent strengthening of economic and trade relations between the two neighbouring countries. Finally, due mention is made of on President's latest initiative to recognize as Israeli territory the land occupied in the Golan Heights, a remnant of the 1967 six-day war.		
1		

IENE GEOPOLITICS BULLETIN		Issue No 13- April 2019
<b>SYRIA: Who controls what</b>		
		
<p>On the basis of the above, the question is what Turkey will do and if it will invade Manbij on the pretext of clearing ISIS, but basically keeping in mind the expulsion of the Kurdish "terrorists", despite the official objections of the Americans, as well as the co-operation of the Kurds with Assad's forces. It should also be noted that the attempt to occupy Manbij is extremely difficult to achieve as a military endeavor per se.</p> <p>It is also worth noting that the Syrian Kurdish military branch is very well equipped by the Americans and constitutes an extremely powerful force in this region where there are many conflicting interests and many conflicts. An area that starts from Iran, runs over Iraq, Syria and part of Turkey and ends up in Lebanon and therefore has a great geopolitical significance not only for the current protagonists, but also for Israel, Egypt and the rest of the Arab world, the SE Mediterranean and, of course, European Union itself.</p> <p>Interestingly, energy doesn't play much of a role in Syria because the country is not an important energy player. It is commonplace to think of the Iraqi invasion of Kuwait in 1990 and the subsequent US-led coalition to liberate Kuwait as being predicated on 'freeing up the oil'. Similarly, the war in Iraq in 2003 has been widely</p>		
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IENE		July 2, 2019 • Issue 38
<b>South East Europe Electricity Market Analysis</b>		
<b>Week 26: 24 – 30 June 2019<sup>1</sup></b>		
High demand, low baseload availability and slightly increased prices in Central Europe drive the regional electricity price increase.		
<p>For a third consecutive week, the electricity markets of South East Europe were largely affected by weather driven demand, as persisting high temperatures kept the energy demand for cooling at high levels. Slightly increased electricity prices in Central Europe led regional prices converging at 46 €/MWh. High RES performance, mainly windpower, throughout the region, helped limit the electricity price increase. However, reduced hydropower output in Serbia, Bulgaria and Turkey and reduced availability of coal-fired baseload in Romania, Serbia and Bulgaria increased the electricity import dependency in the region and exercised pressure on regional electricity prices. Notably, in Romania, Greece and Turkey windpower performed at a very high level, but only Turkey sustained a high price increase due to soaring electricity demand.</p> <p>In Greece, the weekly average marginal price of electricity fell to 66.49 €/MWh, decreased by -1.71% in comparison to Week 25. The highest daily marginal electricity price occurred on Friday 28 June, reaching 76.23 €/MWh. The electricity price decline can be mainly attributed to increased generation from RES. Even though weekly electricity demand increased rapidly, reaching 1,116.52 (+4.8% or +71.7 GWh w-w) pushing prices upwards, the very high RES output, which reached 293 GWh (+92.52% or 140.81 GWh w-w) balanced the increased demand and completely offset the upwards pressure to electricity prices. It is notable that power generation from RES in Greece recorded the single best weekly performance up to date during Week 26, mainly due to very strong winds during 25 – 27 and 29 – 30 June, displacing more expensive generation namely from lignite-fire power plants and natural gas turbines, which produced 211.13 GWh (-3.62% or -7.93 GWh w-w) and 340.97 GWh (-11.93% or -46.18 GWh w-w) respectively. Furthermore, the weekly transaction volumes on the HENEX energy exchange increased to 1,135.3 GWh (+7% w-w).</p> <p><sup>1</sup> The weekly analysis of SEE electricity markets draws data provided by SEE Energy Exchanges and processed on behalf of IENE by Energy Live. The commentary of the analysis is prepared by IENE's Research and Analysis Department. Data on the regional power generation and distribution is drawn from: ENTSO-e, IPTO (Greece), Terna (Italy), Transselectrica (Romania), EMS (Republic of Serbia), YTBIS (Turkey), MAVIR (Hungary), ESO (Bulgaria), KOPS (Croatia)</p>		
SEE ELECTRICITY MARKET ANALYSIS, No38, JULY 2019		

IENE		July 2, 2019 • Issue 38
<b>Electricity Market Analysis (GWh) - Daily Volumes</b>		
		
<b>Electricity Market Analysis (GWh) - Hourly Volumes</b>		
		
SEE ELECTRICITY MARKET ANALYSIS, No38, JULY 2019		

**SOUTH-EAST EUROPE ENERGY BRIEF**  
**Monthly Analysis**

Published by the Institute of Energy for South East Europe

Issue No 280 • March 2019


**How Feasible is Decarbonisation in SE Europe?**

Lately, decarbonization as a concept and a coordinated set of actions has come to dominate Europe's current and long term (i.e. 2030 and 2050) energy strategies. When considering SE European energy policy, decarbonization will come to play an important role as it affects the whole spectrum of energy - from power generation to transport, building, industry, trade and services sectors. The ultimate objective being the reduction of Greenhouse Gas (GHG) emissions. In this context and as far as SE Europe is concerned, the power sector is expected to play central role in the decarbonization process, as it is in a position to deliver much quicker and more visible benefits, in view of the much higher volumes of gases involved.

Decarbonization in the case of power generation means reduction of the sector's carbon intensity, which in turn means decline of the emissions per unit of electricity generated. Decarbonisation is of particular importance for coal-intensive regions, such as SE Europe, in order to transit into a "cleaner" energy mix. A gradual decarbonisation of the power sector can be achieved by increasing the share of low-carbon energy sources, like renewables and nuclear, as well as by capping GHG emissions from fossil fuel power stations through Carbon Capture and Storage (CCS) technology and Carbon Capture and Utilisation (CCU). A shift from "dirtier" fossil fuels, like coal (which emits on average 900g CO<sub>2</sub>/kWh), to lower emissions fuels, like gas (which emits about 400g CO<sub>2</sub>/kWh) and renewables, can also help to reduce power plant emissions.

Reaching climate neutrality by 2050, as envisioned by the European Commission's strategic long-term vision, requires timely decarbonisation of the European energy sector, including a complete phase-out of coal. This will particularly affect regions which are dependent on the coal sector and other high-carbon industries, as they will have to follow a transition phase to low-carbon economies in the coming decades. This briefing offers a deep dive into the positioning of key stakeholders as well as opportunities and challenges for a transition away from coal in the coal-dependent SE European region.

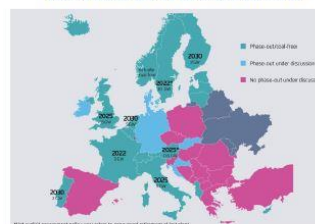
Most governments in SE Europe, in contrast to the rest of Europe, remain committed to continuing coal use. Based on IENE's estimates, the share of solid fuels for power generation

**SOUTH-EAST EUROPE ENERGY BRIEF**  
**Monthly Analysis**

Issue No 280 • March 2019

competition [5]. Consequently, in April 2018, the Greek government adopted a law to enable the country's main electricity generator and provider, the Greek Public Power Corporation (PPC), to sell part of its lignite assets in exchange for financial assistance from the EU. The deadline for submitting binding bids has been repeatedly extended. The sale raises concern on the fate of workers and communities. Nonetheless, the need for a transition begins to be recognized. In January 2019, as part of a bill on energy and environmental issues, the Greek government established a National Transition Fund for lignite areas, which is planned to be funded using 6% of annual revenues from auctioning emissions allowances. Over a period of three years, the fund will support activities in six priority areas, including renewables, energy efficiency, key sectors, circular economy, industrial heritage and re-skilling of workers [6], while Western Macedonia has been assigned as a pilot region of EU's Coal Regions in Transition Platform. [7]

Map: Coal phase-out years and operational capacity in Europe



Sources: Agora Energiewende, Europe Beyond Coal

At EU level, Greece, together with Poland, support subsidizing coal or lignite through allowing the participation of coal-fired power plants in capacity mechanisms. In addition, it unsuccessfully lobbied with the PPC for free emission allowances as part of the revision of the EU's Emissions Trading System (ETS). Without these free emission allowances, the two new lignite-fired power plants are not considered economically viable [8]. The Greek government intends to keep the lignite industry alive well beyond 2030 and actively

**SOUTH-EAST EUROPE ENERGY BRIEF**  
**Market Watch**

Published by the Institute of Energy for South East Europe

December 5, 2019 • Issue No 298, November 2019


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**INTERNATIONAL AND REGIONAL NEWS**
**OPEC+ Agrees to Record Cuts Under Saudi Pressure**

OPEC+ will adjust its output target and redistribute production cuts between its members under pressure from Saudi Arabia, which has long carried an outsized share of the burden.

The group, which pumps more than half the world's oil, agreed in Vienna on Friday to reduce its output target by 500,000 bopd, said delegates, bringing it in line with recent production levels. Saudi Energy Minister Prince Abdulaziz bin Salman gave a clear signal before the meeting that his priority was to get some members to stop cheating and implement the cuts they have promised.

"Like religion, if you are a believer you have to practice. And without practice you are an unbeliever," Prince Abdulaziz said at the opening session of Friday's meeting. "The market will have to trust us. The analysts will have to believe us" and if they don't "we cannot deliver what we want to achieve. It is as simple as that, and sometimes it is as tough as that."

After days of rumor and mixed messages that whipsawed prices, the shape of the adjusted deal between the Organization of Petroleum Exporting Countries and its allies gradually emerged. Oil

**SOUTH-EAST EUROPE ENERGY BRIEF**  
**Market Watch**

December 5, 2019 • Issue No 298, November



The \$6.5 billion TANAP crosses the breadth of Turkey, east to west, and could transport up to 16 billion cubic meters (bcm) of Azeri gas a year. Europe is allocated 10 bcm, with 6 bcm earmarked for the Turkish market. Capacity could be increased to 31 bcm with additional investment. An inauguration ceremony was held on November 30 in the Turkish town of Işale on the Greek border and attended by Turkey's President Tayyip Erdogan and Azerbaijan's President Ilham Aliyev.

It marked the completion of the transfer infrastructure to Greece as well as the whole TANAP pipeline. TANAP's first section, ending at a Turkish discharge point in Eskişehir, was completed last year. "Aside from insuring the energy needs of our country with TANAP, we aimed to contribute to Europe's energy supply security," Erdogan said.

The pipeline connects to the Trans-Adriatic Pipeline (TAP), which is still under construction and will then transfer up to 10 bcm gas to Greece, Albania and Italy. "The real responsibility from now on lies with our neighbors on the other side of the border. The Trans-Adriatic Pipeline needs to be completed as soon as possible to start the transfer of gas to Europe," said Erdogan, adding that it was expected to be completed in 2020.

TANAP's shareholders are Azeri state energy company SOCAR (51%), Turkish pipeline operator BOTAS (30%), BP (12%) and SOCAR Turkey (7%). Separately, Erdogan said Turkey and Russia would launch the Turkstream pipeline with a ceremony in Istanbul on Jan. 8. Russia is Turkey's largest gas supplier. The first part of the pipeline is designed to supply Turkish domestic customers, while the second part is expected to run further - from Bulgaria to Serbia and Hungary.


**BiH, Serbia Unlikely to Meet 2020 Renewables Targets**

Bosnia and Herzegovina, and Serbia are unlikely to meet the 2020 renewables targets, while the situation in Albania, Kosovo and North Macedonia remains questionable, the Energy Community Secretariat said.



Issue No 278 • January 2019

**SOUTH-EAST EUROPE ENERGY BRIEF**  
*Regional Insight*



Published by the Institute of Energy for South East Europe

## The Outlook for Russia's Energy Sector

*By Dr. Tatiana Mitrova\**

From economic sanctions, to geopolitical concerns over cross-border infrastructure projects, to an evolving global market for natural gas, a set of shifting dynamics are having a substantial impact on Russia's energy sector.

To discuss these issues and more, host Jason Bordoff, Director Center on Global Energy Policy at the School of International and Public Affairs at Columbia University, recently sat down with Dr. Tatiana Mitrova, Director of the SKOLKOVO Energy Centre in Moscow and a Fellow at the Center on Global Energy Policy, on the latest episode of the Columbia Energy Exchange. Tatiana has over 20 years of experience in dealing with Russian and global energy markets, including production, transportation, demand, policy, pricing and market restructuring.


During their conversation, Tatiana and Jason discussed Russia's oil and gas sector, including Russia's export policies and its relationship with other producer countries. Tatiana also discussed the economic and geopolitical consequences of the Nord Stream 2 pipeline project. Other topics in their conversation included Gazprom's response to the changing global gas market, Russian gas market liberalization efforts, and the future of Russia's relationship with Saudi Arabia.

**Transcript**

**Jason Bordoff:** Hello and welcome to Columbia Energy Exchange, a weekly podcast from the Center on Global Energy Policy at Columbia University. I'm Jason Bordoff. Russia is one of the world's major energy power players; the second largest producer of oil and gas in the world after the United States. And Russia's energy exports, especially of natural gas into Europe have long ways geopolitical concerns and tensions among many. Recent developments to make understanding Russia's energy sector is important as ever. From sanctions and its new found cooperation with OPEC countries on oil supply, to Russia's rise as an LNG powerhouse and new questions about the controversial Nord Stream 2 gas

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**SOUTH-EAST EUROPE ENERGY BRIEF**  
*Regional Insight*



just to try to understand each other. I'm afraid there were not so many zones of mutual interest on potential cooperation but I still don't give up hoping that we will find something where we can not only compete but also work together.

**Jason Bordoff:** You were just presenting this morning here at Columbia, a new paper you've written for the Center on Global Energy Policy about the impact of U.S. LNG on Russia's natural gas sector and Russia's natural gas exports strategy. Tell us a little bit about what you found in that paper?

**Tatiana Mitrova:** So, there was a tremendous impact from the U.S. LNG side on the whole Russia's gas export policy and it began to affect even before the first cargo from U.S. has reached through European or Asian market. So the very idea that there is an alternative supplier, the very idea that there is additional LNG available, it was already forcing Gazprom to change its policy to become more flexible in terms of contracts pricing, marketing and this is really incentivizing huge transformation of the markets with much more spot component with more flexible contracts. And the whole Gazprom's strategy became much more flexible than it used to be. So, compared to the old style 20-year oil-indexed contracts, now Gazprom is looking for new ways to sell gas. It hasn't reduced its electronic trading platform. It is trading on the spot basis. It is looking how to keep customers with it, but to make more attractive value proposition. It has speeded up its pipeline projects just for seeing that there will be major competitor on the market and it needs to conquer the market share. So there was also this huge shift in the LNG export strategy. Recently, Novatek commissioned its first LNG project where it was very successful. So, it is not only Gazprom now which is carrying on gas exports. It is also Novatek and I would say Gazprom finds itself now under very strong pressure from non-Gazprom producers. And it has to be very cautious when marketing its gas in Europe for example, because if it makes a mistake, if it loses market share as it did in 2009, 2012, there will be probably change in the export monopoly rule. So therefore Gazprom is much more motivated to be market oriented. To keep its customers with it.

**Jason Bordoff:** So let me pick apart a couple of things you said there a few different strands that are important to what you just said. I recall working in the Obama administration when the U.S. government was debating whether to approve permits to export natural gas and if you go back today and read the approvals the department of energy offered in 2011, 2012, one of the arguments they made was that, they had a view that the export of U.S. LNG index

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# IENE NEWS

THE INSTITUTE OF ENERGY FOR SOUTH-EAST EUROPE EDITION • Autumn 2018-Spring 2019



## A year of Energy Markets in Transition

**Editorial**

The past few months have been a period of intense activity and great mobility for the Institute with the organization of a series of events in South East Europe and beyond as well as the completion and the launch of major research and study projects. In work the Institute has been assisted by a dedicated administrative team augmented with the arrival of new expertise. This year started with the launch of a major publication, entitled 'Annual Report on Greece's Energy Sector 2019', which the Institute aspires to publish on an annual basis. This study which took almost a year to prepare provides an in depth analysis of Greece's energy situation and its role in SE Europe. This publication which covers the entire energy sector forms a most useful reference for the industry but also for researchers and policy makers. At the start of the year IENE also released the full text of a study it carried out last year on 'Natural Gas Supply in South East Europe and the role of LNG' and has since been widely quoted by analysts and journalists.

Last September the Institute published a Working Paper on 'Electric Vehicles and their prospects in Greece and SE Europe' following completion earlier last year of a multi client study on the same subject. This study was supported by a diverse group of companies comprising power generators, a major oil and gas regional company and a leading law firm. Also, during the whole of last year the Institute was busy carrying out a pioneering study on the energy self sufficiency of the island of Kastellorizo which is one of Greece's most isolated islands in the south easternmost part of the Dodecanese complex. Because of its remoteness the island has little chance of being connected to the country's main grid hence its long term energy viability in view of the

decarbonization policies pursued by the European Union is in question. The study foresees the combined use of photovoltaics and wind energy backed by adequate storage capacity with the aim of achieving near 100% energy autonomy. Once completed later this year this IENE study could act as a pilot project in pursuing schemes for island energy autonomy not only in Greece but all over Europe.

Last year was remarkable in terms of research and study projects undertaken by the Institute's in house scientific team but also on account of a whole series of events organized by itself or in association with local partners in Brussels, London, Nicosia, Thessaloniki and Athens. The launch last October of the 'SEE Electricity Market Analysis' weekly newsletter came to fill an important information gap and augments the Institute's various commitment in providing its members with credible and up to date information in the broad energy sector of SE Europe. In this context it is useful to remind our readers that the Institute currently publishes three weekly newsletters including its flagship 'Energy Weekly Report' two monthly ones (Market Watch and Monthly Analysis, part of the SEE Information brief) the bi-monthly 'Energy Fundamentals and Prices' and several ad hoc reports, company profiles and briefing notes.

Although more than 18 months have passed since publication of IENE's seminal work, the 1150 pages 'SEE Energy Outlook 2016/2017' is impact is still strong with the Institute is receiving a constant flow of requests for presentations to diverse audiences all over SE Europe. Encouraged by this phenomenal success the Institute is now embarking on its plans to publish next year the 2020 edition of SEE Energy Outlook report. More information on this new endeavor and other tasks which IENE has undertaken or about to start you will read in the following pages of this latest and much revamped issue of IENE News.

**Georgios Stambovitis**  
Executive Director of IENE

EVENTS REVIEW 2018-2019

## SE Europe's Upstream Potential and Current Activities fully discussed at IENE's latest Workshop

**IENE's latest workshop which was organized in Athens at the end of October 2018 helped reveal the true extent of SE Europe's not insignificant oil and gas resources.**

These are to be found in four distinct geographical zones, which inadvertently correspond to geological ones, and are broadly located in the Adriatic, which extends south to the Ionian, the Black Sea, Turkey's Anatolian Basin and the East Mediterranean. Thanks to a highly select group of top experts who participated in this highly focused two-day event, the region's activities in the upstream sector were fully discussed with new data presented for the first time. Following welcome remarks by the chairman of IENE Mr. John Chadiyassiladis, and Ms. Tereza Fokianou, chairperson of IENE's Upstream Working Group, the Institute's Executive Director introduced the subject



The oil and gas potential of the Alpine Folded Belt, part of the Dinaric-Hellenic range, which expands between the Dinarides in the North and the Hellenides in the south (ie North South Adriatic and Ionian) was fully explored by Dr. Vlastakis, director for Environmental Protection at the Croatian Hydrocarbon Agency, and by Mr. Ilija Gjerman, Head of the Regulatory and Management of the Petroleum Sector of Albania's Ministry of Economy. Mr. Nannis Grigoriou, CEO of Hellenic Petroleum Upstream S.A. (part of the Hellenic Petroleum Group.) focused on Hellenic Petroleum's strategy and actions for the resurgence of the Greek E&P sector including the company's participation in well formed international consortia which have now been awarded major onshore and offshore concessions in Greece's western part but also southwest of Crete.

The Israeli experience was expertly presented by Dr. Gini Cohen who provided a detailed account of Israel's both onshore and offshore. Dr. Yuridaki Vighitguden, a well known energy expert and former Secretary General of the Ministry of Energy and Natural Resources in Ankara and more recently Coordinator of OSCE economic and environmental activities, presented a detailed report on Turkey's exploration and production efforts having first provided a most useful background on Turkey's overall energy sector. In spite of consistent efforts over the years indigenous production is stagnating while oil and gas imports are growing with proven reserves also diminishing.

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Cyprus's findings and current and planned exploration programme was presented by Mr. Demetris Fessas, Assistant Manager of Cyprus's Hydrocarbon Company, which is the National Hydrocarbon Company of the Republic of Cyprus (RoC) and is responsible for the commercial management of the RoC rights as included in various production sharing contracts. With three exploration rounds already undertaken Cyprus has made two important discoveries (Aphrodite and Calypso) with concessions signed in six out of its twelve offshore blocks. Targeting Zohr analogues, exploration efforts continue in Blocks 6, 7, 10 and 11.

With some 65 participants actively engaged in two days of presentations, discussions and social gatherings IENE's latest SEE Upstream Workshop proved another successful event for the Institute. Hellenic Hydrocarbons Resources Management (HHRM), Hellenic Petroleum and Energen Oil and Gas were the event's sponsors.

INSTITUTE OF ENERGY FOR SOUTH-EAST EUROPE

IENE NEWS 3

## 5.IENE's Research Projects and Studies

## 5. Research Projects and Studies (2019 -2020)

Since its foundation IENE has set as a major goal the undertaking of studies and research projects across the energy sector as this usually fosters the basis for informed opinion and analysis. Special emphasis is accordingly placed on new and innovative technologies and systems which can be applied in SE Europe. The sectors of energy and technological development constitute one of the basic activities of the Institute which is participating in the setting up and undertaking of research projects and the preparation of studies, working papers and publications regarding energy, the environment and development issues covering not only Greece and SEE but also the global scene. The bulk of the study and research work at IENE is undertaken by its in-house scientific team. In certain occasions when a project of wider interest concerning the area of SEE is undertaken, external collaborators may participate, coming not only from various sectors of the energy sector but also from many countries in the area.

The results of the institute's research projects and studies are reported in the form of working papers, published papers in learned journals, research monographs, newsletters and briefing notes. Most of this information is available in electronic form and is regularly presented and dispatched to IENE's members and other interested parties. A detailed report on the projects undertaken by IENE, in the past year scheduled as well as those already in progress follows. Most research projects/ studies are also uploaded regularly on IENE's website ([www.iene.eu](http://www.iene.eu)).

### IENE's Research Work in Progress

- **IENE Annual Report for 2019 on Greece's Energy Sector (M03)**

The Annual Report on Greece's Energy Sector was completed at the end of 2018 and published in February 2019. The scope of this report, which IENE aspires to publish annually, is to provide a comprehensive overview of the country's energy sector with extensive reference on current and past activities and achievements.

The Institute expects this report to provide a well-researched review but also a guideline for energy market developments and prospects in Greece, as well as a benchmark for government, banks, companies and professionals in the energy sector. The first such annual report included Greece's key energy developments in 2017, while also highlighting briefly major energy developments in the first half of 2018.

Publication of the report (in Greek) was followed by an English language Executive Summary. (For further details please click the following link: <https://www.iene.eu/articlefiles/executive%20summary%201.pdf>).

- **Energy Transition of the Island of Kastellorizo (M45)**

In September 2017, IENE embarked on a study project focusing on Greece's southernmost island, Kastellorizo. The study examined the conditions under which Kastellorizo could become energy autonomous taking into consideration environmental objectives and socio-economic development. The study was part of the broader programme of initiatives developed by IENE for the island's energy security and sustainable development. The Kastellorizo energy sustainability study is considered of great strategic importance to Greece and covered issues related to electricity, water, energy efficiency, electrification in transport and high penetration of RES. The non-technical barriers and their removal, as well as the technical constraints for the required 43 applications with the participation of the Prefecture, the local authority and the private sector, were also explored. Overall, the study produced a strategy as well as detailed guidelines in an effort to achieve the island's energy autonomy. The above study was financially supported by PPC Renewables, Hellenic Petroleum (ELPE), HEDNO and Aegean Airlines and was undertaken under the auspices of the Ministry of Environment and Energy. The study was completed in June 2019 and was presented in a special event on October 24, 2019, on the Armed Forces Officers' Club, in Athens. (For further details please click the following links: <https://www.iene.gr/articlefiles/executive%20summary%20final.pdf>, <https://www.iene.gr/articlefiles/kstellorizo%20-%20perellis%20-%20deth.pdf>)

- **Long-Term Gas Contracts (M55)**

Authored by Ms. Gina Cohen, the well-known Israeli lecturer and consultant on natural gas, this study was published by IENE in the summer of 2019. The study focuses on the main characteristics of long-term gas contracts based on the author's experience regarding the general rules and negotiating tactics.

Gina Cohen analyses the Gas Sales and Purchasing Agreements (GSPAs) which serve as a main tool for the division of market risks by means of tying natural gas Sellers and Buyers for a considerable period. Because of the high capital intensiveness and market orientation of gas development, GSPAs have been one of the fundamental tools enabling Sellers to invest in exploration, production and development of gas fields, transporters to promote essential gas transportation infrastructure whether pipelines or liquefaction facilities, and Buyers to invest in consumer facilities, secure in the knowledge that they will have the gas supplies needed for their project's life-span.

The aim of the 146-page study is to present an overview on gas sales and purchasing contracts but also empirically analyse them. The intention, as the author underlines, is not to consider all gas contracting issues, but only the GSPA fundamentals, such as the main terms and definitions, issues of firm volume and flexibility, and some gas pricing issues. The text is supplemented with actual examples and case studies on various aspects of GSPA, including disputes, standard questions and specialised studies. The research provides both factual data and practical recommendations for both parties of

the contract. The study is intended to be a practical tool for both students and individuals involved in GSPA negotiations and drafting. (For further details please click the following link: <https://www.iene.eu/articlefiles/Long-Term%20Gas.pdf>).

- **Greece - Cyprus in the New Energy Era – A Special IENE Publication**

This special IENE publication (in Greek) entitled "Greece-Cyprus in the New Energy Era", filled a serious gap in reporting and analysis on energy developments in the wider area of Greece. The publication, which was the result of collective effort, included contributions of eminent experts in the field of energy and geopolitics, aiming to present and highlight the two countries' co-operation in the crucial energy sector in the SE Mediterranean region, at a time of intense challenges. The publication was published in the summer of 2019 and presented in a special event held at the Institute of International Relations of the Panteion University, in Athens, on December 12, 2019. (For further details please click the following link: <https://www.iene.gr/page.asp?pid=5058&lng=1>).

- **Prospects for the Establishment of Gas Trading Hubs in SE Europe (M49)**

IENE completed the above study in mid-November 2019, which was developed on a multiclient basis and presented in a closed meeting between IENE and the participating companies at the offices of the Central European Gas Hub (CEGH) in Vienna. In addition to CEGH, the study was financially supported by Greece's Independent Gas Transmission Operator (DESFA), by the Hellenic Energy Exchange (EnEx) and by MotorOil SA, one of Greece's leading energy companies.

The main purpose of the study is to describe the current situation in the gas markets of Central and Southeast Europe, with the operation of gas trading hubs and energy exchanges. It is worth noting that there is not a single gas trading hub in SE Europe currently in operation east and south of Vienna, with the Central European Gas Hub (CEGH) being a reference point and a basis for promoting gas trading in the region. The study also describes in detail the latest developments in the establishment of gas trading hubs in SE Europe. Based on the latest results of 2018 Annual Scoreboard of European Federation of Energy Traders (EFET), the Hellenic Trading Point (HTP) appears to be on track to become the first gas trading hub in the region, a position expected to be further strengthened through the full operation of the Greek Energy Exchange in June 2020. Other countries that aim to emerge as gas trading hubs in SE Europe include Turkey, Bulgaria and Romania. (For further details please click the following link: <https://www.iene.gr/page.asp?pid=5058&lng=1>).



## Selected IENE Studies (2019)



**Prospects for the Establishment of Gas Trading Hubs in SE Europe**

IENE Working Paper No28

Athens, June 2020



**Figure 2: EU Natural Gas Imports by Country, 2015-2018**

Source: European Commission, Quarterly Report on European Gas Markets (Vol. 11)

According to IEA's 2019 Gas Report (5), gas production in Europe is expected to decrease at a rate of 3.3% per year by 2024, meaning that approximately 45 bcm of domestic gas supply will be lost. This is largely driven by the decision of the Dutch government to phase out the giant Groningen field by 2030 at the latest. As shown in Figure 3, the Netherlands accounts for over 60% of the decline in European gas supply by 2024.

**Figure 3: Gas Production in Europe, 2004-2024**

Source: IEA

Falling UK production is the second source of European production decline (18% of the region's decrease between 2018 and 2024). Production in other European countries, such as Denmark, Germany and Italy, is also expected to decline, and to

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**«Η Ενεργειακή Αυτάρκεια του Καστελλόριζου»**

Μελέτη IENE (M45)

Final Report

Αθήνα, Ιούνιος 2019



**Ανάλυση της ενεργειακής κατανάλωσης στην Ελλάδα**

Σύμφωνα με τα αποτελέσματα της ανάλυσης, η ενεργειακή κατανάλωση στην Ελλάδα παρουσιάζει σημαντική αύξηση, ιδιαίτερα στον τομέα της βιομηχανίας και των μεταφορών. Η αύξηση αυτή οφείλεται κυρίως στην αύξηση της παραγωγής και της κατανάλωσης ηλεκτρικής ενέργειας, καθώς και στην αύξηση της κατανάλωσης πετρελίου και φυσικού αερίου.

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## Ετήσια Έκθεση 2019



Ο κόσμος δημιουργεί, σταδιακά, ένα διαφορετικό είδος ενεργειακού συστήματος, αλλά εντονίζονται ορατά προβλήματα στους βασικούς πυλώνες:

• **Προσιτότητα (affordability)** Το κόστος των ηλεκτρικών αυτοκινήτων και των πακέτων ενεργείας να μειώνεται, αλλά οι τιμές του πετρελαίου αναμένεται να αυξηθούν τόσο από τα \$80 το βαρέλι μέχρι τα τέλη του 2018, να πέσουν φθινόπωρο και να ξανθούν, σύμφωνα με εκτιμήσεις του Διεθνούς Οργανισμού Ενέργειας (IEA).

**Απορία (reflexivity):** Οι κινήσεις για την αντιμετώπιση της απορίας οδηγούν προφανώς στην έλλειψη ή καθυστέρηση της λήψης αποφάσεων. Ένα από τα αποτελέσματα της απορίας δεν είναι πρόκληση στην ηλεκτρονική σύγκληση και οι νέες προτάσεις επανεξετάζονται με την ελπίδα να υπάρξει η κατάλληλη λύση. Η απορία μπορεί να οδηγήσει στην αλλαγή της συστήσεως, με την αλλαγή στον ηλεκτρονικό χώρο.

• **Βιωσιμότητα (sustainability):** Μετά τρία χρόνια στατιστικής, οι μεγάλες εταιρείες εκτιμούν διεξοδικά τον άθροισμα τους σχετίζεται με την ενότητα, αλλά έχουν αυξηθεί 1,8%, το 2017 και τα προκύπτει από την ανάλυση των αποτελεσμάτων της έρευνας του 2018, οι μεγάλες εταιρείες για πρώτη φορά είναι συμβατές με τους τέσσερις «κατευθυντήριους στόχους».

Η ΔΕΚΑ - ΕΡΕΥΝΑ... (Σελίδα 6)

Οπως αποδείχθηκε, οι περισσότεροι από τους 1,7 εκατ. πολίτες που συμμετείχαν στην έρευνα, θεωρούν ότι η Ελλάδα είναι μια χώρα που έχει χάσει την ακεραιότητά της, υπάρχουν και εκείνοι που πιστεύουν ότι η ανεργία είναι η αιτία της απώλειας της ακεραιότητας της χώρας. Τα παράπονα, που προκύπτουν από την έρευνα, παραμένουν σχετικά εντονά, καθώς οι περισσότεροι από τους 1,7 εκατ. πολίτες που συμμετείχαν στην έρευνα θεωρούν ότι η Ελλάδα έχει χάσει την ακεραιότητά της. Τα παράπονα, που προκύπτουν από την έρευνα, παραμένουν σχετικά εντονά, καθώς οι περισσότεροι από τους 1,7 εκατ. πολίτες που συμμετείχαν στην έρευνα θεωρούν ότι η Ελλάδα έχει χάσει την ακεραιότητά της.

[illegible]<sup>a</sup> IEA (2018). *World Energy Outlook 2018*. <https://www.iea.org/weo>

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**Gina Cohen**  
Consultant on Natural Gas

	GOG	OPE	BIM	NET	RCS	RSP	RBC	NP
Consumption	86%	19%	3%	-	11%	14%	6%	1%
Production	45%	9%	2%	-	15%	20%	8%	1%
Pipeline Imports	61%	31%	8%	-	-	-	-	-
LNG Imports	28%	72%	-	-	-	-	-	-

## 6.2 Price Negotiations in a GSPA

Conventional wisdom is that price – and the associated terms of escalation, price re-openers etc. – are left until last in GSPA negotiations. Why? For the reason that until all other significant items are settled, it is difficult for either Buyer or Seller to value the GSPA as a whole and decide what price to attach to it. This does not mean that other clauses cannot be re-opened during the price negotiations stage, but at any other time than an agreement is executed. If Buyer and Seller are just so far apart in a price negotiation, it may be impossible to reach an agreement without renegotiating some other significant value item in the GSPA that had previously been 'agreed'. Remember the negotiator's maxim: 'nothing is agreed until everything is agreed'.

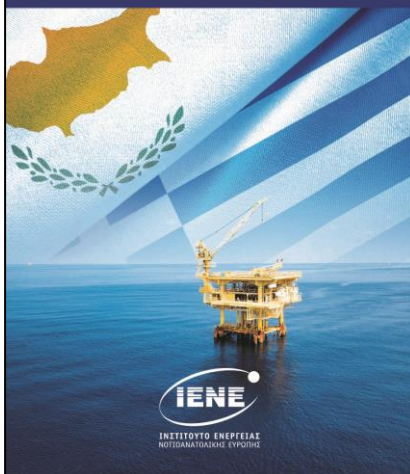
**Case:** When might it not be a good idea to leave price negotiations until last in the GSPA negotiations process?

**Example #1** - It is possible that you may have no choice in the matter. As a Buyer, you may have submitted a tendered bid for some gas which includes offering a price (and escalation terms) against a Heads of Agreement summarising the anticipated main terms in a final GSPA. However, this still doesn't preclude some negotiations on price if the final GSPA terms do not end up being entirely satisfactory.

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Ειδική Συλλογική Έκδοση ΙΕΝΕ

**ΕΛΛΑΣ-ΚΥΠΡΟΣ**  
στη Νέα Ενεργειακή Εποχή



Προλογικό Σημείωμα στη Συλλογική Έκδοση του ΙΕΝΕ

**Ελλάς-Κύπρος στη Νέα  
Ενεργειακή Εποχή**

του Νίκου Αναστασιάδη  
Προέδρου της Κυπριακής Δημοκρατίας

θα ήθελα, κατ' αρχάς, να συγχαρώ το ΙΕΝΕ για την πρωτοβουλία της πολιτικής συλλογικής έκδοσης στην οποία συγκαταλαμβάνονται οι απόψεις εγκρίτων επιστημόνων για τον καθορισμό ή την εξέλιξη της ενέργειας για την Κύπρο και την Ελλάδα. Θεωρώ ότι είναι αξιόλογη η προσπάθεια αυτή, καθώς οι απόψεις των εμπειρογνοστών που διαμορφώνουν τις συστάσεις για την FMW (Financial Media Way) - σημαντικές καθ' όσον συμβάλλουν στην διαμόρφωση των απόψεων της πολιτικής ηγεσίας στον κρίσιμο αυτό τομέα. Αποτελεί μια κατ' εξοχήν προσπάθεια, όπως η επιστημονική ημερίδα, έρευνα αρωγών στην πολιτική ηγεσία, η οποία καλείται να διαχειριστεί τα νέα πολιτισμικά δεδομένα που διαμορφώνονται στην περιοχή μας. Αξιοσημείωτη την ακαδημαϊκή ημερίδα, αλλά και η ιστορική μας εμπειρία, διαμορφωμένη για στρατηγική, η οποία είναι άρκετα συνδυασμένη με τη γεωγραφική μας θέση στην περιοχή της Μεσογείου και με την (εξωτερική πολιτική) και συμμαχία που έχουμε σχηματίσει.

Δεν έχουμε αμφιβολία πως η ανακάλυψη σημαντικών αποθεμάτων υδρογονανθράκων στην Ανατολική Μεσόγειο, μπορεί και πρέπει να λειτουργήσει ως καταλύτης για ευρύτερη συνεργασία σε περιφερειακό επίπεδο, συμβάλλοντας έτσι στην ασφάλεια, στη σταθερότητα και στην ευημερία της περιοχής.

Αυτή την προώθηση κάνουνε πράξη, καθεμιά, αναπτύσσοντας βοήθειες και ειδικμένες σχέσεις με όλα τα κράτη της περιοχής καθιερώνοντας, τακτικές μηχανισμούς συνεργασίας με την Ελλάδα, το Ισραήλ, την Αίγυπτο, την Ιορδανία, τον Λίβανο, την Παλαιστίνη, και εκτείνοντας πλέον τις δράσεις και τις σχέσεις μας με τις χώρες του αραβικού Κόσμου. Μχανισμούς συνεργασίας, οι οποίοι αποδεικνύονται ιδιαίτερα επιτυχημένοι, με απτά και σημαντικά οφέλη για τις συνεργαζόμενες χώρες, που ως αποτέλεσμα είχαν την εκδήλωση ενδιαφέροντος από τις ΗΠΑ και από χώρες της Ε.Ε., για συμμετοχή και αναβάθμιση τους σε διεθνές forum ανάλογο άλλων, όπως ο ΟΑΙΕ (Οργανισμός για Αραβικά και Συνεργασία στην Ευρώπη).

Σας συγχαίρω για τις πρωτοβουλίες που αναπτύσσετε και εύχομαι η συμβολή σας στον επιστημονικό διάλογο που αναπτύσσεται για το θέμα της ενέργειας να είναι ακόμη μεγαλύτερη στο μέλλον. Διάλογο που η πολιτική ηγεσία οφείλει να αξιοποιεί προς όφελος του δημοσίου συμφέροντος και της εθνικής.

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## Scheduled Studies

The following is a list of study projects which commenced in 2019 and are scheduled for completion in 2020 and 2021.

### i. Studies under preparation

#### (M48) SE Europe Energy Outlook 2020/2021

As a follow up to the past two editions of IENE's SEE Energy Outlook (2011, 2017), the Institute has already initiated the preparation of a new reference study in 2019 under the title "SE Europe Energy Outlook 2020/2021", which will be published in March 2021. The study is expected to provide a well-informed view of the energy sector in SE Europe, examining 15 countries in total ("core countries") and more than 10 peripheral countries of Europe and the Eastern Mediterranean. The particular study will analyze in depth all the economic, political, geopolitical, legal, fiscal and other parameters which are influencing the energy sector of the area, whilst focusing on the basic issues that are being addressed. At the same time, the particular study will comprise a huge number of data and information, including scenarios regarding the way the energy market (demand and supply) will be shaped by 2030 and 2050, as well as estimations on the course of investments for the whole spectrum of energy applications in the countries of SE Europe during the next decade (2021-2030). The work on the particular study commenced in early 2019 and will be completed to a large extent during 2019 and 2020, while the study is expected to be published in March 2021.

#### (M53) Feasibility Study of Energy Storage Systems' Integration in Crete

The integration of energy storage systems in the case of Crete is estimated to have significant benefits, such as the increase in the installed capacity and energy utilization from RES units, avoiding the functioning of new and/or existing conventional power plants, the increase in the flexibility system with ancillary services and the reduction of marginal electricity costs in the special bidding zone of Crete. IENE has already started an in-depth analysis using modeling of the energy needs of the island and the prospects of the integration of energy storage systems with increased use of RES, taking into account the imminent electricity interconnections of Crete with Greece's interconnected system and the implementation of the Target Model.

The study is conducted by IENE on behalf of IPTO and started in the second half of 2019, while it is expected to be completed and delivered to IPTO within 2020.

#### (M54) The Integrated Electricity Markets in Greece and SE Europe, the Role of the International Electricity Interconnections and the Impact on Industry

The main objective of this multi-client study is to analyze the framework within which energy-intensive industries in Greece and SE Europe will perform in the years ahead in



view of the implementation of the Target Model in Greece, now slated for fall this year. This study is undertaken by IENE on behalf of ElvalHalcor SA, Elpedison SA, Mytilineos SA, Heracles Group of Companies, the TITAN Cement Group, as well as the Hellenic Union of Industrial Consumers of Energy (UNICEN), as these companies wish to ascertain how wholesale and retail electricity prices are to shape in the years ahead, following full market coupling in the region.

More specifically, the study focused on two main areas: (a) an understanding of the functioning of regional electricity markets through the imminent changes, and (b) an examination of the prospects and the repercussions of the electricity market integration among the SEE countries. Regarding part (b), the integration refers to the market coupling and the increase of electricity flows, through the related interconnections, and the implementation of the Target Model in many countries of SE Europe. In this context, the study focused on the quantitative evaluation of the regional electricity market with specific focus on electricity market prices on retail and wholesale level and the opportunities risen for industrial consumers and electricity market participants. The evaluation was made for different sets of assumptions with the development of the costs of carbon emissions being a common parameter. For this specific issue, IENE will cooperate closely with Professor Pantelis Capros, Scientific Coordinator of E3 Modelling, and his team, who used PRIMES model and two specially developed mathematical sub-models deployed to perform system and market simulation and retail price estimation respectively.

The study is expected to be completed in mid 2020, while a broad summary of the study and its main findings will be published by IENE sometime later in 2020 in the form of a Working Paper.

#### **(M56) IENE Annual Report for 2020 on Greece's Energy Sector**

The scope of this report, which is the second edition and IENE aspires to publish annually, is to provide a comprehensive overview of Greece's energy sector with extensive reference on current and past activities and achievements. The Institute expects this report to provide a well-researched review but also a guideline for energy market developments and prospects in Greece, as well as a benchmark for government, banks, companies and professionals in the energy sector. In addition to hard data contained in this sectorial analysis, the report contains estimates on potential and planned investments. Anticipated energy related investments in Greece between 2020-2030 could well reach €45.2 billion..

### **ii. Scheduled Studies**

#### **(M05) Prospects for an Expanded South Gas Corridor**

The particular study aims to summarize the work of IENE regarding the new transit routes for natural gas in SE Europe as well as the anticipated infrastructure projects and how they are expected to contribute to the creation of an extended South Corridor which is not limited in the

pipeline system of TAP-TANAP. The particular study is making good use of existing studies (such as “The East Med Gas Corridor”, M21), as well as IENE analyses referring to the latest pipeline and LNG terminal developments.

### **(M36) European Gas Supply and the Role of the East Mediterranean**

This is a multi-client study, which aims to examine the alternative routes for the transportation

of natural gas from the Middle East to Europe. This project constitutes essentially an assessment study, taking into account the anticipated needs of natural gas supply of the European Market and the competition of supply amongst various producers. The possibilities for gas purveyance of Europe from the gas fields of Eastern Mediterranean, is being extensively examined within the particular framework.

The particular study is a follow up to Research Note No. 3 of December 2012 which was entitled “The Role of Greece as a Supply Route to Europe in View of the Latest Gas Discoveries in the East Mediterranean” and also relates to the study in progress on “The East Mediterranean Energy Corridor” (M21). The latter is dealing with the ways natural gas is being transported from the gas fields of the Eastern Mediterranean (i.e. Israel, Cyprus, Egypt) to the markets of Europe, including the East-Med pipeline. In addition, the M21 study is referring to the production and export of energy via the high-voltage direct current (HVDC) subsea cable system of Euro-Asia Electricity Interconnector.

### **(M50) Investing in Greece’s Energy Sector**

This is meant to be a basic reference study regarding investments in the energy sector of Greece. The study also provides a brief review on latest developments regarding the Greek economy and labor market in the energy sector. The goal of the particular report is to identify important investment projects in Greece’s energy sector and also discuss the potential and outlook for their implementation. The particular study will be conducted on a multi-client basis and will be largely funded by members companies of IENE..

### **Working Papers to be published**

A brief description follows of studies and projects undertaken by IENE, which will be published as Working Papers (WP) with some of them to be submitted for publication in learned international scientific journals

### **Energy as a basic tool for Economic Growth in Greece in the 21<sup>st</sup> Century**

This is a Working Paper which will draw material from existing studies and analyses prepared by IENE. It will include a summary of basic investment choices and directions

in the Greek Energy Sector and discuss their impact on Greece's economic development. The study will be published as a WP over the following months.

#### **A Gas Trading Hub for SE Europe**

The particular work will be based on IENE's studies (M19 and M51) and analyses the role of gas hubs in the development of gas markets in SE Europe. To be published as a Working Paper over the following months.

#### **The Expanded South Corridor**

The particular study draws material from previous studies by IENE and refers to the new gas transiting routes in SE Europe and on how these contribute to the creation of a much wider South Corridor to the already existing one, that is the TAP-TANAP Gas Pipeline.

The study constitutes a summary of the latest developments regarding the pipeline system under construction as the one that is being currently designed. It also takes into account the development of LNG terminals for the gas supply of the wide region of SE Europe through the design and construction of a new pipeline system.

#### **East Mediterranean Gas Resources and Export Options**

The particular work which was presented by IENE in a conference organized in Israel during November in 2016, will constitute the basis for the drafting of a Working Paper and it will also be submitted for publication in a scientific journal.

#### **The Outlook for the SE European Energy Sector**

The particular work, which is based on IENE's major study, the "SE Europe Energy Outlook 2016/2017 and will be submitted for publication in a scientific journal. It aims in providing a concise presentation of IENE's results but also include some latest analysis.

#### **Innovation in the RES sector and its contribution to Economic Development in SE Europe**

The particular work discusses innovation aspects in Renewable Energy Sources (RES) in the SE European region and how it is expected to gain full momentum in the years ahead.

Most of the countries of SE Europe are currently at the crossroads regarding the choice of the proper strategy that will gradually lead to the achievement of greenhouse gas reduction as well as to an environmentally cleaner and sustainable development. Both targets constitute the necessary conditions for the promotion of economic growth especially since the development of RES constitute a critical factor in ensourcing cooperation, cohesion and development in the region.

The particular analysis, initially in the form of a Working Paper and then in the form of a paper to be submitted for publication in a learned journal, is expected to broaden and enrich the discussion which is currently underway regarding the role of RES in the economic and energy development in SE Europe.

### Research and Study Tools

As the various research and study projects of the Institute evolve, there is a need for publicizing them in order to initiate a first discussion and exchange of views among IENE members and associates with the view of improving the research and study work at hand. With the view of facilitating the particular discussion, the results of the studies as well as of well-founded proposals and analyses are being circulated by the Institute in the form of Briefing Notes, Research Notes and Working Papers. An extensive list of such Briefing Notes and Working Papers that have already been published but also those under preparation is included in the following section. Once published the Working Papers as well as the Briefing Notes, are being circulated to the members of the Institute and at the same time they are posted on the members' area of both sites of IENE [www.iene.gr](http://www.iene.gr) and [www.iene.eu](http://www.iene.eu) respectively. The following is a list of WP already published by IENE:

#### Working Papers

- **No. 1:** "Principles of Effective Operation of the Greek Electricity Market ", November 2014
- **No. 2:** "The Problem of the Summer Peak, Causes and Response Measures", November 2004
- **No. 3:** "The Emerging Role of LNG in Regional Energy Markets", January 2006
- **No. 4:** "The Cost of RES Development in Greece", December 2006
- **No. 5:** "The Priorities of European Policy in the Energy Sector, Dilemmas and Messages for Greece", December 2006
- **No. 6:** "The Energy Center of Agios Nikolaos in Viotia and its Impact on the Energy System", November 2005
- **No. 7:** "The New Landscape in the Electricity Market in Greece ", July 2009
- **No. 8:** "Solar Thermal Power Generation Systems Technologies and their Prospects in Greece", July 2009
- **No. 9:** "Infrastructure Unbundling in SE Europe", July 2009
- **No. 10:** "The Fourth Corridor Gas Pipelines; Perspectives, Uncertainties and Implications for SE Europe and Greece", July 2009
- **No. 11:** "CO2 Capture and Storage in the Electricity Generation Sector; An Alternative for CO2 Emissions Reduction", January 2011

- **No.12:** "Research, Exploration and Production of Hydrocarbons in Greece", January 2011
- **No.13:** "Energy as a Key Lever for Economic Development in Greece in the 21st Century", February 2017
- **No.14:** "The Potential Impact of the Liberalized Domestic Energy Market on the End Users of Natural Gas in Greece", June 2012
- **No.15:** "Biofuels in the Transportation Sector in Greece", June 2012
- **No.16:** "The Security of Energy Infrastructures", June 2012
- **No. 17:** "The Greek EEZ: Principles of a Geopolitical Analysis", July 2013
- **No.18:** "Towards a National Energy Policy", December 2013
- **No.19:** "Renewable Energy Sources and Energy Efficiency and their Role in Energy Security in SEE", February 2014
- **No. 20:** "The Vertical Corridor: From the Aegean to the Baltic ", January 2015
- **No. 21:** "Greece's Experience in Using EU Structural Funds for Improving the Energy Performance of Buildings", December 2014
- **No. 22:** "Albania's Electricity Sector and the Role of Hydropower", May 2017
- **No. 23:** "The Impact of Global Markets on East Med Gas Developments", January 2018
- **No. 24:** "Prospects for the Electric Vehicle Market and Business opportunities with special reference to SE Europe and Greece", September 2018
- **No. 25:** "The critical role of Natural Gas in the transformation of the Greek Energy Market", March 2019
- **No. 26:** "Natural Gas Import and Export Routes in South-East Europe and Turkey", July 2019
- **No. 27:** "What Kind of Energy Transition? The Case of CE and SE Europe", August 2019

#### Working Papers under Preparation

- **No. 28:** "Prospects for the Establishment of Gas Trading Hubs in SE Europe", June 2020
- **No. 29:** "The role of gas in the new European energy environment and the importance of the East Mediterranean", July 2020
- "East Mediterranean Gas Resources and Export Options"
- "Turkey's New Regional Role in Energy"
- "The Key Role of Hydroelectricity in SE Europe"
- "The RES agenda for SE Europe: A Critical Assessment"
- "The Nuclear Energy Option for SE Europe"
- "Energy Security and the role of RES in SE Europe"


**Briefing Notes: (2012-2019)**

- **No.1:** “Global and Regional Developments in the Natural Gas Sector”, December 2012
- **No. 2:** “An Overview of the South Corridor Gas Pipeline Projects”, July 2013
- **No. 3:** “Energy Security at the Forefront of European Energy Policy”, June 2014
- **No. 4:** “The Natural Gas Sector in SE Europe”, March 2015
- **No. 5:** “The Real Impact of Carbon Emissions Reduction”, April 2015
- **No. 6:** “The Nuclear Power Generation Programme of Turkey”, June 2015
- **No. 7:** “China’s Nuclear Power Play and its Impact in SE Europe”, pending
- **No. 8:** “Bulgaria and Romania: Under Turmoil on Geopolitical and Migration Grounds”, May 2016
- **No. 9:** “Conclusions of the Study on the Installation of Antifouling Technologies at EAC-Generation Power Plants in Cyprus”, June 2017
- **No. 10:** “A Look Ahead to 2019 and Beyond”, January 2019
- **No. 11:** “China’s Entry in SE Europe’s Energy Sector”, May 2019

The collage consists of several presentation slides from IENE (Institute of Energy Economics).


- Slide 1:** Title "«Ο κρίσιμος ρόλος του φυσικού αερίου στον μεσοπρόθεσμο της ελληνικής ενεργειακής αγοράς»". Subtitle "ΚΕΙΜΕΝΟ ΕΡΓΑΣΙΑΣ - Working Paper No 25". Image shows industrial pipes.
- Slide 2:** Title "2.3. Μεγάλα έργα φυσικού αερίου". Content discusses EU funding for gas projects and includes a bar chart showing investment trends from 2008 to 2014.
- Slide 3:** Title "WORKING PAPER Working Paper No26 Document Update 22 January 2020". Image shows large storage tanks.
- Slide 4:** Title "NATURAL GAS IMPORT AND EXPORT ROUTES IN SOUTH-EAST EUROPE AND TURKEY". Author: Gina Cohen, Lecturer & Consultant on Natural Gas.
- Slide 5:** Title "WORKING PAPER Working Paper No27 July 2019". Image shows a person standing in front of solar panels and wind turbines.
- Slide 6:** Title "What Kind of Energy Transition? The Case of CE and SE Europe". Author: By Dimitris Mezartasoglou and Costis Stambolis.
- Slide 7:** Title "Map 2.1: Net Coal Power Capacity in 2019 and the Projection for 2030, according to the Draft NERPs". Includes a map of Europe and a legend for coal capacity categories.





**Prospects for the Establishment of Gas Trading Hubs in SE Europe**

IENE Working Paper No28



Athens, June 2020

operations. However, for Bulgarttransgas the revenue is very substantial, around 60% for the last 4 years. The reason for the disparity seems to be that Transgas operates a much larger system handling larger domestic volumes and transit distance is much shorter. The Romanian market is almost four times the size of the Bulgarian one (11 bcm vs 3 bcm), and transit is only 200 km across Romania. (27)

With total proven reserves of 1.3 tcm, Azerbaijan is not considered as the country that will solve the problem of European energy supply (with the Eastern Mediterranean region possessing three times more reserves). However, Azerbaijan's export capacity, through the SCP-TANAP-TAP system and its gas treatment plants, will very soon become a reference point for the entire Caspian region, as part of a wider attempt to exploit export capacities of the neighbouring countries.

Table 3: Major Gas Pipeline Project Under Construction in SE Europe

Project	Shareholders	Length	Cost	Capacity
TAP	BP (20%), SOCAR (20%), Soam S.p.A (20%), Plumpy (19%), Enagel (16%) and Augo (2%)	878 km	6.5 billion	10.0-20.0 bcm/y
IGB	80% (70%), EU Foundation (10%)	182 km	4200 million	5.0-6.0 bcm/y
Turkish Stream	Gazprom, BOTAS	1,100 km	€11.4 billion	31.5 bcm/y*
Bulgaria-Romania-Hungary-Austria (BRHA)	Bulgarttransgas, Transgas, FGSZ, Kustream, GCA	500 km	4500 million	6 bcm/y

\*This amount corresponds to the first two strings of the pipeline with an additional 31.5 bcm foreseen when strings 3 and 4 will be constructed and become operational.

Sources: IENE and involved energy companies

Following the landmark energy agreement signed between the Caspian Sea countries of Russia, Azerbaijan, Iran, Kazakhstan and Turkmenistan in August 2018 (28), Turkmenistan and Iran are already in negotiations with Baku for the exploitation of Azerbaijan's gas network in order to export large quantities of gas through Turkey to European markets. With Azerbaijan and Turkmenistan currently discussing the transportation of limited gas quantities (i.e. 5-9 bcm) through the existing underwater pipeline network and through the construction of the planned Trans Caspian Pipeline (see Map 5). Thus, Azerbaijan is anticipated to play an important role as a major hub for the transportation and promotion of natural gas from the wider Caspian region to the West (29). On July 4, 2019, TAP launched a market test to allow natural gas shippers to express interest and potentially secure access to new, long-term capacity in TAP. The market test includes two phases: (a) non-binding phase, as of July 1, 2019 and (b) binding phase, which is expected to start in Q2 2020 at the earliest. The results of the non-binding first-round market test,

[29]



**The role of gas in the new European energy environment and the importance of the East Mediterranean**

IENE Working Paper No29



Athens, July 2020

And with Europe going increasingly green, through the EGD, and with EU carbon emission targets being raised to levels attainable only through the adoption of renewables at the expense of gas, the future is challenging.

**Impact on the rest of Cyprus' EEZ**

It is not only development of Aphrodite that faces challenges, but the resumption of exploration and drilling in the rest of Cyprus' EEZ (Figure 5) is also becoming increasingly challenging.

Figure 5: Licensed blocks in Cyprus' EEZ




Source: Cyprus Ministry of Energy

ExxonMobil's first-quarter results were very disappointing, reflecting the crisis being faced by the global hydrocarbons industry. According to S&P Global, it has now lost its top spot among the IOCs to Shell.


All companies in Cyprus EEZ, including Shell, Total, Eni and Noble, had disappointing first quarter results and have all announced major spending cuts. They are also restructuring and divesting of non-core assets, taking actions to safeguard their balance sheets.

The failure to make a discovery in Lebanon, after all the hype, will weigh heavily in Eni/Total's plans in the region. It is possible that they will eventually return to complete appraisal drilling of Calypso. With gas quantities expected to be around

[33]



**IENE Briefing Note No.11**



**China's Entry in SE Europe's Energy Sector**

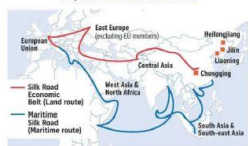
May 2019

IENE Briefing Note No.11

fifties of the country's overseas investment was reportedly spent on coal in 2018. (23)

All in all, the initiative aspires to be green but is still providing the political and financial support for the export of Chinese coal technologies. As analysed during the second Belt and Road Forum for International Cooperation met in Beijing on April 25-27, 2019, China continues to be a top financier and exporter of coal technologies globally, contradicting its promotion of a "green" belt and road and the climate change goals post-Paris Agreement.

Map 1: China's Belt and Road Initiative



Source: Bloomberg

Over recent years, Chinese banks have become the lenders of last resort for coal projects in south Asia, Africa and the Balkans that the World Bank and other international institutes have refused to fund because coal is the primary source of carbon emissions from electricity generation. Although China has won kudos for trying to clean up its environment by cutting dependence on coal, its companies are making up for lost business at home by expanding overseas. Most of their funding comes from the BRI.

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## 6. Special Research and Study Programmes

## 6. Special Research and Study Programmes

Having taken into consideration its goals and targets and acknowledging the current social conditions and needs in SE Europe, IENE is willing to contribute, based on its experience as well as its technological know-how and its organizational capacity, through a series of programmes and projects of a wider interest with the view to (a) improve the living conditions of vulnerable groups in Greece and SE Europe and their access to energy sources (b) promote energy innovation (c) set an example through the implementation by IENE of best practices in energy use.

These programmes aim at raising public awareness and in contributing to particular issues of wider public interest. IENE is aspiring not only in generating positive results in the improvement of living conditions of a great part of the population, both in Greece as well as in other countries of SE Europe, but also in the creation of employment opportunities.

### **(i). Programme on Energy Poverty**

The preparation and implementation of a series of pilot projects especially in Greece and then in Albania, Romania, Bulgaria, and Serbia will constitute a part of the particular programme. The aim will be to make use of established technologies and low-cost techniques for the use of renewable energy and the improvement of the energy performance of buildings and similar installations in domestic and community level (i.e. schools, medical centers, sport centers). The implementation of these works will be possible through the financing by member companies of IENE as well as through their contribution with technical means, material and know-how. After the completion of the particular pilot projects, the results will be disseminated to a wider audience so that there will be an interest for the replication of the particular project by local communities and citizen groups.

### **(ii). Programme on Energy and Employment**

This programme is a follow up to the most successful study by IENE on “Energy and Employment” which was completed in December 2013. (For further information you may click on the link below

<https://www.iene.gr/articlefiles/m09%20-%20meleti%20final.pdf>

The particular study includes detailed data and a mapping of the state of employment in the whole of the energy sector and has managed to arrive at specific conclusions regarding the creation and the maintenance of employment in Greece’s energy sector. The proposed new study is aiming at the updating of the 2013 study data but also in undertaking a detailed examination of current conditions for the creation of jobs in the energy sector which is continuously

evolving as well as estimations regarding the conditions for their long-term maintenance through the use of advanced analytical methods. The study will provide specific conclusions regarding the implemented policy and the choice of the most promising energy sub-sectors which are appropriate for the realization of effective energy investments that are in position to contribute effectively in the creation of employment.

**(iii). Energy and Innovation**

IENE has taken the initiative to organize the first annual competition of Energy and Innovation in the Energy sector with the view of presenting and making good use of ideas and research results, as well as drawing new researchers and businesses in research and innovative activities.

The Energy sector constitutes an important factor in the competitiveness of the economy and social growth. At the same time, it should be environmentally friendly, leading to sustainable development and meeting the challenges posed by Climate Change.

The above Competition by IENE is aiming at presenting various research projects and their results so that a connection with the market is established. The aim is to promote a broad network of cooperation and to make a good use of studies' results. At the same time, it is trying to encourage and attract new researchers in various research and innovation projects and business ventures. As the energy and economic sectors are highly competitive, it will all the more be sustained through innovation and highly qualified and specialized personnel. This is why, IENE's research activities may contribute in these sectors, through the presentation and promotion of the existing production capacity both at home and abroad.

Finally, the target of this "competition" is to award researchers for their work and generate support for the research community which is operating in the energy and environmental sectors, in anticipation of economic and social benefits.

The Scientific and Technological sections of the competition cover the research activities in the area of energy-in relation to the environment-, as well as environmental issues directly related to the energy sector. A wide range of technologies and applications here been identified starting with the primary sources of energy, energy production, transportation, use and management, and leading to new energy application sectors such as storage, energy efficiency. These are some of the many areas to be covered by the "competition", including those of sustainable development and the achievement of environmental targets.

**(iv). IENE move to new Offices of Zero CO<sub>2</sub> Emissions**

As the work of IENE develops both in the fields of information and education as well as in the studies and researches and also in the organization of specialized events and especially regarding the energy transition, it becomes urgent to search for new larger spaces to move in. The relocation of IENE offices to a larger space is now a top priority for the Institute, because only in this way IENE will be able to develop a series of initiatives and activities that today are limited due to lack of suitable spaces but also to be reorganized into new, more functional and effective standards.

Especially through the relocation of IENE into bigger offices, the Institute is aiming at:

- (a) The creation of an organized library so that its premises can be visited by the members of the Institute and researchers. IENE possesses of a wide range of material including books, reports, periodicals, as well as abundant educational material in electronic form produced by IENE which will be accessible through fully equipped spaces (i.e. public access computer terminals), which will be created within the library area.
- (b) The creation of a seminar room, so that IENE has the possibility to organize inhouse on a regular basis a series of courses and other educational activities. IENE is currently renting spaces in hotels and elsewhere. However, the Institute must acquire a seminar room of its own and equip it with state of art facilities, in order to be able to conduct a wide variety of educative courses.
- (c) The creation of conference rooms so that various scientific and other committees of the Institute assemble -which at present due to a lack of adequate spaces to meet outside the Institute. This will contribute to the orderly and effective functioning the Institute since a big part of its activities is being conducted in cooperation with its partners from both Greece and abroad as well as with external consultants who actively participate in various activities of IENE.
- (d) Moving into new offices will provide the opportunity for their upgrading in terms of energy efficiency and CO<sub>2</sub> reduction. Depending on the premises to be found IENE could turn this into a demonstration project of successful energy renovation.

Moving to new IENE offices is a strategic goal and the efforts continue with optimism for better and wider services in the energy and business community, in the society and the economy as well as to the environment for the country and the wider region of SE Europe.

### ***Financing of Studies and Programmes***

Funding for IENE's research and study work is provided through various sources. These include, EU research programmes (i.e. Energy Intelligence, Horizon, Smart Cities), in cooperation with specialized EU organizations where IENE is participating as a consultant (i.e Building Performance Energy Institute (BPIE), Joint Research Centre (JRC, Petten)) as well as companies and organizations which through funding are supporting specific studies of the Institute. The following are some examples:

- **Energy and Employment in Greece** (M09), December 2013: Funding provided by DEPA, Attiki Gas Supply, Energean Oil & Gas and PPC
- **"The Outlook for A Natural Gas Trading Hub in SE Europe"**, September 2014: Funding provided by Hellenic Gas Transmission System Operator S.A. (DESFA), DEPA, LAGIE, /Hellenic Exchanges S.A, Gastrade
- **"SE Europe Energy Outlook 2016/2017"**: funding provided by HELPE, PPC, DEPA, Supported by: TERNA Energy, LAGIE, Energean Oil & Gas, Independent Power Transmission Operator S.A. (ADMIE), ENSCO, KG Law Firm, Hellenic Exchanges S.A. and JRC (Petten)
- **"Prospects for the Electric Vehicle Market in Greece and Business Opportunities"** (M47), July 2018: funding provided by Sunlight SA, KG Law Firm, Mytilineos Group, Hellenic Petroleum SA
- **"Prospects for the Establishment of Gas Trading Hubs in SE Europe"** (M49), November 2019: funding provided by DESFA, Hellenic Energy Exchange (HEnEx Group), MotorOil SA, Central European Gas Hub (CEGH – Vienna)
- **"The Integrated Electricity Markets in Greece and SE Europe, the Role of the International Electricity Interconnections and the Impact on Industry"** (M54), in progress, funding provided by Hellenic Union of Industrial Consumers of Energy (UNICEN), Elpedison, Heracles General Cement Corporation, TITAN Cement Group, Mytilineos Group, ElvalHalcor S.A.

Benchmark studies such as the aforementioned, are undertaken by IENE on a multi-client basis, where a whole team of companies sharing common interests agree to participate. The companies are thus supporting the work of IENE after having evaluated its importance in relation to their own work and targets.

IENE is facing a lot of challenges in the area of research. It has already designed a demanding programme of study and research projects in order to address the fast-changing priorities in the energy sector. However, this entails a continuous effort in securing the necessary funding.

Within the aforementioned framework, IENE has the ability to design in collaboration with other interested parties (organizations or companies), an adjusted research and educational program which will respond to the needs and the aspirations of all parties involved.

## 7. Educational Activities

## 7. Educational Activities

Being in constant touch with the energy market and the wider energy community in Greece and abroad, keeping track of energy developments in general and providing on a continuous basis high quality information to its members, IENE constitutes today a core platform where accumulated knowledge and experience on energy both in Greece and in the wider area of SE Europe is being provided for. IENE's extensive experience coupled with the Institute's wide network of collaborators and associates, has enhanced the Institute's privileged position in the field of energy information. Given IENE's wide experience and excellent credentials, the Institute has organized over the last five-years, a series of workshops and seminars in the energy domain.

More specifically, IENE has organized a series of introductory courses regarding energy under the title **"The Cycle of Energy"** (2011 and 2012). This was followed by the postgraduate seminar under the title **"Energy and Geopolitics"** (2015, 2019, while a 3<sup>rd</sup> series is scheduled for 2021). Another series of seminars **entitled "Introduction to Greece's New Electricity Market"** (held in spring and autumn of 2019, while the 3<sup>rd</sup> series which will be in English, is scheduled for September 2020). The aforementioned seminars, where more than 80 people attended in all, have helped IENE to organize the syllabus at both graduate and postgraduate level. The experience acquired through the organization of these seminars is of great importance and has contributed significantly to the Institute's latest initiative to expand its educational activities at both graduate and postgraduate level.

Hence, IENE is preparing the undertaking of a new series of seminars to take place during autumn and spring in 2020 and 2021 respectively.

### Proposed series of IENE Educational Courses

Six series of courses are proposed during the academic years 2020-2021. The aforementioned courses will be organized by IENE with guest lecturers having been selected through IENE's pool of scientific personnel, corporate membership as well as external consultants (academics, independent researchers, business professionals).

(1) Introduction to Greece's New Electricity Market (3<sup>rd</sup> Educational Seminar) (September 2020) (in English)

In view of the new electricity market which will become operational within 2020 and will be based on the "target model" and the Hellenic Energy Exchange, IENE is intending to organize the 3<sup>rd</sup> series of this educational seminar which is addressed mainly to business professionals in the energy sector who wish to be informed on the way this new energy



market will function. It will be a fast track seminar of 16 hours of teaching by experienced energy professionals as lecturers who have a thorough knowledge of the subject.

**(2) Improving Energy Efficiency (December 2020)**

A series of 8 to 10 courses covering energy efficiency as well as ways of its improvement in companies, public buildings and houses. The particular seminar will be addressed to engineers, architects or environmental engineers who wish to become energy professionals and to apply innovative technologies and technical energy efficiency applications on buildings.

**(3) Introduction to the New Gas Markets (December 2020)**

A series of 4-5 lessons regarding the new gas market and how it will affect private and public companies, public buildings and homes. This seminar will be addressed to graduate engineers, environmental engineers and market executives who wish to be informed about how the new market works.

**(4) Postgraduate Seminar on Energy and Geopolitics (March – April 2021)**

This is a postgraduate level seminar which can be completed in approximately 18 to 20 sessions. It includes the preparation and the submission of a dissertation at the end of the seminar. It should be noted that IENE has successfully organized this type of seminar during the first quarter of 2015 with the participation of 15 students. The target of the seminar is to expose and analyze the ever-growing interdependence between energy and geopolitics, at a time when the geopolitical environment of SE Europe is in constant upheaval whilst the greatest energy potential of the region is gradually revealing itself. The latest developments in Syria and Iraq, the destabilization of Ukraine, the constant struggle between Russia and the West combined with the energy needs of the EU within the framework of climate change, and the ever growing need for greater energy security in the area, create a complicated situation which is further impeded by the unresolved crisis in the EU and the world economy.

IENE's particular course at a postgraduate level covers a wide range of topics which will cover all the aforementioned issues. It is addressed to business professionals, military officers, current diplomats, journalists but also scientists who wish to broaden their knowledge and to be informed in depth and on the basis of a scientific methodological/approach on the energy and geopolitical developments. The aim of the particular seminar is to give the trainees a strictly scientific methodology and an analytical approach, understanding and a deepening of understanding of the relationship between energy and geopolitics so that they are able after the completion of their educational course to manage effectively issues referring to data analysis and to the evaluation or prediction of future developments.

**(5) Investing in the Energy Sector (Spring of 2021)**

An introductory series comprising 8 to 10 courses through which energy investment opportunities are being explored. In addition to 2 introductory lectures which will be prepared by the scientific personnel of IENE, there will be 8 to 10 presentations made by business professionals operating within the energy market in the form of case studies, with the target to cover the greatest part of energy applications (RES, industry sector, buildings, oil and gas).

**(6) Techniques for the energy upgrade of buildings (Spring of 2021)**

A module of courses of technical orientation, which will be addressed to engineers, architects or environmental engineers, who wish to professionally apply innovative technologies and energy technical efficiency applications on buildings. There will be a two to three-month seminar with almost 50 hours of attendance including on-site visits.

**(7) The Energy Cycle (Fall of 2021)**

A series of 14 courses is aiming at introducing students in the broad energy sector. Evening courses will take place twice a week and lectures will be given by experienced executives and renowned scientists and managers of the energy sector. Each course covers a particular topic (i.e. wind energy, solar energy, energy autarky) which will be taught by two different lecturers.

## Highlights from IENE Educational Seminars

**Highlights from the 2<sup>nd</sup> Series of the Postgraduate Educational Seminar on “Energy and Geopolitics”, which was organized in cooperation with the Institute of International Relationships (IIR), of the Panteion University (March – April 2019)**



**Highlights from the 2<sup>nd</sup> Series of the Postgraduate Educational Seminar on “Introduction to Greece’s New Electricity Market”, which was held in the OTE Academy (October – November 2019)**



## 8. Conferences and Other Events (2019, 2020)

## 8. Conferences and Other Events (2019, 2020)

The organization on a regular basis of seminars, conferences, workshops as well as of regional high-level conferences, constitutes one of the core activities of IENE. In average, IENE is organizing 8 to 10 events per year, some of which are taking place in Greece while others in countries around SE Europe. Most of these events are organized by IENE itself, while others in collaboration with regional agents, especially in the countries in SE Europe. In 2019 IENE organized 13 events alone or in collaboration with other parties. Details for the particular events have been posted on IENE's sites, and all IENE members have access to the particular studies and proceedings through IENE's website membership area. For each event there is a corresponding microsite where most of IENE's work as well as of IENE's publicly disclosed documents, are posted. The detailed list of IENE events is as follows:

### ➤ 2019

- **New Year's Celebration, Electra Palace Hotel, 18 – 20 Nikodimou Str. Athens,** Monday, January 14, 2019 (18:30)
- Presentation of IENE's 2019 Annual Report on **Greece's Energy Sector, Divani Caravel Hotel, 2 Vassileos Alexandrou ave., Athens,** Wednesday, February 13, 2019 (11:30 – 15:00)
- Roundtable meeting on the "**The Geopolitics of Energy Transition**", (part of IENE's Energy Transition Roundtable Meetings), under the auspices of the **Ministry of Foreign Affairs, Athens,** Tuesday, March 5, 2019 (For further details, please visit the following link: <https://www.iene.eu/en/congress/15/2nd-iene-colloquium-on-the-geopolitics-of-energy-transition?p=79> )
- One day conference on the "**Challenges and Opportunities in Greece's Electricity Market**", **Divani Caravel Hotel, 2 Vassileos Alexandrou ave., Athens,** Thursday, May 9, 2019 (For further details, please visit the following link: <http://www.iene.eu/el/congress/16/oi-prokliseis-stin-leitourgia-tis-agoras-ilektrikis-energeias>)
- INNOPATHS Workshop on: "**Towards carbon neutrality, the perspective of investors**" organized by E3 Modeling in partnership with IENE **Electra Palace Hotel, 18 – 20 Nikodimou Str. Athens,** Wednesday 15 May 2019 (16: 00-19: 00)
- IENE Regional Conference **Vienna Energy Transition Forum**", (part of IENE's Energy Transition Meetings), in co-operation with **Energy Centre Europe, Vienna,** Thursday

- Friday, June 6 - 7, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/17/vienna-energy-transition-forum> )
- **“Hydrocarbons in SE Mediterranean”**, in co-operation with the Technical Chamber of Greece (TEE), Athens, Tuesday, June 18, 2019 (For further details, please visit the following link: <https://web.tee.gr/eidisis/oi-ydrogonanthrakes-stin-anatoliki-mesogeio-oi-technika-arties-lyseis-eggyisi-gia-anaptyxi-kai-apotelesmatiki-prostasia-toy-perivallontos/> )
- One day conference on **“East Mediterranean: The new natural gas frontier”**, in cooperation with the **Energy Institute, London**, Monday, October 7, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/21/east-med> )
- Regional Workshop **“Energy Transition and Investment Challenges in SE Europe”**, in co-operation with ROEC, Bucharest, Romania, Wednesday, October 16, 2019 (For further details, please visit the following link: <http://www.iene.eu/en/congress/23/energy-transition-in-se-europe-policy-and-investment-challenges> )
- Presentation of IENE’s Study on the **“Energy Transition of the Island of Kastellorizo”**, Armed Forces Club (LAED) (Rigillis 1 & Vassilissis Sofias (Pavlou Mela Square), 10675), Athens, Thursday, October 24, 2019, 11:00 – 13:00
- **24<sup>th</sup> National Energy Conference “Energy and Development 2019”**, Athens, Thursday – Friday, November 21 – 22, 2019 (For further details, please visit the following link: <https://www.iene.eu/el/congress/19/energy-and-development-2019?p=116> )
- **7<sup>th</sup> Cyprus Energy Symposium**, in co-operation with **FMW, Nicosia**, Thursday, December 5, 2019 (For further details, please visit the following link: <http://www.iene.eu/el/congress/24/7o-energeiako-symbosio-cyprus> )
- Presentation of IENE’s Special Publication on **«Hellas – Cyprus, in the New Energy ERA»**, **Institute of International Relationships (IIR)**, Athens, Thursday, December 12, 2019, 17:00-19:00

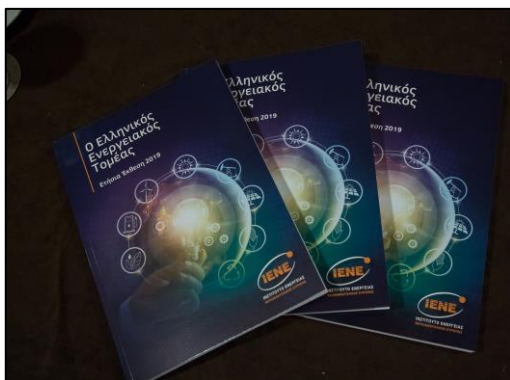
## ➤ 2020

- **IENE New Year’s Celebration**, Hotel Divani Caravel, Monday, January 20, 2020
- Workshop on **“Gas Supply and Competition in SE Europe”**, in cooperation with Eurogas, Brussels, Wednesday, January 22, 2020



The programme for 2020 was predicted to be rich in events but unfortunately the planned events were postponed or even canceled due to the Coronavirus pandemic and the restrictive measures taken to prevent further transmission of the virus. However, for the rest of 2020, some events are planned which will be announced through a separate announcement at [www.iene.gr](http://www.iene.gr) & [www.iene.eu](http://www.iene.eu).

### Highlights of the presentation of IENE's 2019 Annual Report on Greece's Energy Sector, Divani Caravel Hotel (13/2/2019)





**Highlights of the roundtable meeting on the "The Geopolitics of Energy Transition", (part of IENE's Energy Transition Roundtable Meetings), under the auspices of the Ministry of Foreign Affairs, Athens (5/3/2019)**



**Highlights of the one day conference on the "Challenges and Opportunities in Greece's Electricity Market", Divani Caravel Hotel, Athens (9/5/2019)**



## Highlights of IENE's Regional Conference "Vienna Energy Transition Forum" organized in co-operation with Energy Centre Europe, Vienna, (6-7/6/2019)





## Highlights of the one day conference on “East Mediterranean: The new natural gas frontier”, in cooperation with the Energy Institute, London, (7/10/2019)



## Highlights of the regional Workshop “Energy Transition and Investment Challenges in SE Europe”, in co-operation with ROEC, Bucharest, Romania (16/10/2019)





## Highlights of the presentation of IENE's Study on the "Energy Transition of the Island of Kastellorizo", Armed Forces Club (LAED), Athens (24/10/2019)



## Highlights of the 24th National Energy Conference “Energy and Development 2019”, Athens (21-22/11/2019)





## Highlights of the 7th Cyprus Energy Symposium, in co-operation with FMW, Nicosia (5/12/2019)



## Highlights of the presentation of IENE's Special Publication on «Hellas – Cyprus, in the New Energy ERA», Institute of International Relations (IIR), Athens (12/12/2019)





## Annexes

## Annex I – IENE staff

### IENE Staff in 2019



**Costis Stambolis** is the current Chairman and the Executive Director of IENE. He is also a member of the standing committee on Energy and Climate (ESEK) which is the foremost energy policy group of the Greek government. Has a background in Physics and Architecture having studied at the University of London, the North East London Polytechnic (NELP) and the Architectural Association in London from where he holds a Graduate Diploma in Architecture and Energy Studies (AA Dip. Grad). He also holds a professional practice license from the Technical Chamber of Greece (TEE), and a Masters Degree from the Said Business School, University of Oxford, where he studied "Strategy and Innovation".

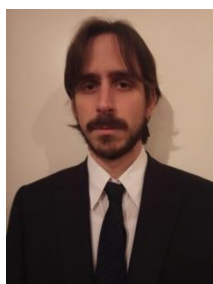
Costis has carried out numerous studies and projects on Renewable Energy Sources in developing countries. He has consulted widely on solar building applications for both private and institutional clients in various European countries. He has worked for many years as a consultant and strategy advisor on natural gas, oil markets and energy security issues for large multinational companies and international organizations.

Since 2001 he supervises and edits daily Greece's foremost energy site [www.energia.gr](http://www.energia.gr). He is a founding member of the Institute of Energy for South East Europe (IENE), where he has been elected three times as its Chairman (2003, 2005, 2019). He is a member of the Energy Institute (UK), the International Passive House Association (IPHA), The Technical Chamber of Greece (TEE) and the Chartered Institute of Journalists (UK).



**Dimitrios Mezartasoglou** commenced his cooperation with IENE in 2015 as an inhouse researcher and he is currently Head of Research. He has studied Economics and he holds two Master's degrees from the University of Strathclyde on Global Energy Management and from the University of Exeter on Money and Banking.

Whilst at IENE, Dimitrios has been part of a variety of projects, including "SE Europe Energy Outlook 2016/2017" study and "Greek Energy Directory 2016" publication, while he is Assistant Editor of "Market Fundamentals and Prices", "Monthly Analysis" and several other IENE's newsletters. In addition, since 2016, he is an associate of [energia.gr](http://energia.gr) where he contributes with articles and analyses on banking analysis and banking analysis of the energy sector.



**Alexandros Perellis** is a Researcher at IENE. He is an Industrial Engineer, graduate of Democritus University of Thrace's School of Engineering (DUTH). In addition, he holds an MSc degree in Sustainable Energy Engineering from Technical University of Denmark (DTU). He has experience in the elaboration of projects related to solar energy systems, modeling and analysis of sustainable energy systems, energy efficiency, feasibility studies and system assessment of energy technologies. As master student, he participated in TOPWASTE project in collaboration with Risø DTU, where he contributed in the development of OptiWaste, a mathematical modeling tool, which handles optimization of waste and energy flows and can be integrated into large energy optimization models.

He joined IENE's research team in November 2017. He is responsible for the publication of "Electric Mobility Update" (bimonthly Newsletter of IENE) and "SEE Electricity Market Analysis" (Weekly Newsletter of IENE) and participates in the elaboration of the Institute's research projects and analyses, with main focus on RES and sustainability. He is the main author of the recently elaborated studies of IENE, "Prospects for the Electric Vehicle Market in Greece and Business Opportunities" and "Energy Transition of the Island of Kastellorizo".



**Alina Gourgiti** is IENE's knowledge officer since October 2018. She has graduated from the International and European Studies department of the University of Piraeus and holds a master's degree in Global Environmental Governance from Vrije Universiteit Amsterdam. She speaks English and French, has worked in NGOs and she has research experience.



**Adam Adamopoulos** is a journalist who works at IENE since May 2018 as Press Officer. He has been responsible for compiling international energy news for "Energy" magazine (Delos Communications), editor of international financial news in Financial Times for SKAI radio, TV show "Teleoikonomia" (ERT) and newspapers "FILEELEFTHEROS" of Cyprus, and DAILY of Athens, as well as editor-in-chief, international correspondent, commentator and TV broadcaster at "New Channel".

He has written the script for the international TV show of introducing the FTSE indexes, on the Athens Stock Exchange, on behalf of Delos Communications, as well as the script for the history of Energy on behalf of Delos Communications. He has attended the Stavrakos Film School and he speaks English. Along with his collaboration with IENE, he works as an editor at Energia.gr.



**Katerina Stergiou** is the Marketing Manager of IENE. She has extensive experience in customer management, strategy and design and implementation of marketing plans. She has contributed to the organization of hundreds of conferences, seminars, press conferences and business meals and to the organization of events in Greece and abroad in general. She is also involved in the advertising and promotion of the Institute by establishing contacts with many companies as a representative of IENE. The design of promotional campaigns and targeted awareness and promotion actions is a key occupation of Katerina Stergiou.



**Elena Iatridi** has been working at IENE since September 2018, having joined the administrative support team and she is a graduate of the Department of Turkish Studies and Contemporary Asian Studies of the National and Kapodistrian University of Athens, while she is a postgraduate student of the University of Western Attica in Energy and Environmental Investments. In IENE, she is responsible for subscriptions and event coordination having as a main responsibility to organize and coordinate conferences and other events in Greece and SEE countries.

## IENE's External Associates



**Nikolaos Sofianos** worked for IENE for ten years (2007 - 2017) firstly as a Researcher and later as Research Coordinator of the Institute. He is a graduate of the department of History and Philosophy of Science of the National Kapodistrian University of Athens while he holds a master's degree in Economic Development from the University of Glasgow in Scotland. He has carried out extensive research into Renewable Energy Sources and their implementation in SE Europe. He was the Coordinator of the EU funded research project Geofar. His main area of interest is energy policy issues. He participates as a publishing assistant in the "Energy Issues" (IENE Monthly Newsletter) and in the "SE Europe Energy Brief" (a series of newsletters issued by the Institute). In addition, he has written many articles on energy while he has participated as a speaker at numerous conferences, seminars and workshops in Greece and abroad. Since 2016, he participates in the Board of IENE as a partner. Finally, he is currently an external Research Associate, regularly contributing to the analysis of energy market issues.



**Anastasios Mastrapas** worked for two years (2014-2016) at IENE as Researcher - Scientific Associate. He is an Electrical Engineer with a MSc in Economics and Finance (AUEB). He was Assistant Editor of "Market Fundamentals and Prices" (bi-monthly Newsletter of IENE) and participated in the development of Institute's research projects. He has a 6-year working experience in the Renewable Energy Sources (RES) sector. He is currently an external Research Associate contributing regularly analysis on energy market issues.



**Vasilis Rallis** is an Energy and Business Development expert, focusing on Energy Efficiency, Renewables and Fintech and an external Senior Research Associate of IENE. Previously he was an Economist at Greek Regulatory Authority of Energy (RAE) responsible for issues concerning financing and liquidity of the market, creation and implementation of the Energy Exchange & Clearing, Supervision. He has also managed various large-scale projects with multiple stakeholders on the Electricity and Natural Gas Markets and participated in the Target Model Task Group. In the past he has worked in Greek and foreign multinational companies in Greece and Great Britain. He holds an MBA (Alliance Manchester Business School), an Economics Degree (Athens University of Economics and Business -former ASOEE) and the Global Energy Certificate (Harvard Business School).



**Alexandros Koutroumbousis** holds a degree in Energy Mechanical Engineering (MEng) from the National Technical University of Athens (NTUA) (1999). Also, he holds a MSc on Energy Production and Management from the NTUA (2003). He has a professional license from the Technical Chamber of Greece as a Mechanical Engineer. Since December 2001, he had worked as manager in various energy companies (Public Gas Company SA, Ergaz SA, Attica Gas Supply Company SA, Natural Gas Hellenic Energy Company) with main subjects the design of commercial policy, design-construction-supply (ECP) of facilities for the use of Natural Gas to industrial / commercial customers, development and management of contracts for the supply of Natural Gas Key Accounts and other sectors. He has published various papers in international scientific journals and since October 2019, he is part of the IENE's research team on IENE's major study the "SE Europe Energy Outlook 2020/2021" and IENE's annual report "The Greek Energy Sector 2020".





**Dr. Gina Cohen** is Lecturer & Consultant on Natural Gas. Gina Cohen has been working as a consultant in Israel and Palestine's gas markets since offshore exploration started there exactly 20 years ago.

During this time, she has been involved in projects spanning the full natural gas chain. She is a lecturer at the Technion University's M.Sc. Program for Petroleum Engineers, is a consultant to international oil and gas companies operating in the Eastern Mediterranean, is the author of the Hebrew English energy lexicon ([www.hebrewenergy.com](http://www.hebrewenergy.com)) used by all professionals in the Israeli oil and gas sector and publishes articles in professional international oil and gas journals.



**Dr Charles Ellinas**, has over 35-years experience in the oil & gas sector in senior management positions. Currently CEO of e-CNHC (E-C Cyprus Natural Hydrocarbons Company Ltd), providing management and advisory services in the oil & gas and energy sectors in Cyprus and the region. A lot needs to be done and the aim of the company is to contribute to the successful development of these sectors for the future of Cyprus. Prior to this, as CEO of KRETYK I was responsible for implementing Cyprus government's strategy for the development of its hydrocarbons sector.

Until 2012 I was a Director of Mott MacDonald for 25 years and the Managing Director of Mott MacDonald's Oil, Gas & Petrochemicals business world-wide.

Charles Ellinas is also Features Editor, Natural Gas World, and Senior Associate, Atlantic Council. Charles has also participated on several occasions at IENE conferences and Workshops and has contributed analysis on hydrocarbon issues related to the East Med. He is currently an external Senior Research Associate of IENE based in London.



**John Roberts** is an Energy Security Expert and an external Senior Research Associate of IENE. He is also a senior partner with Methinks Ltd, a consultancy specializing in the inter-relationship between energy, economic development, and politics. He is also a non-resident Senior Fellow at the Global Energy Centre, Atlantic Council, Washington DC. He is currently researching European energy security issues, including the role of Turkey in European energy security,

Russian gas deliveries to Europe, the development of new supply pipelines and interconnectors within Europe, and the energy security implications of gas discoveries in the Eastern Mediterranean.

Roberts is a respected energy analyst who has testified to UK parliamentary committees on Middle Eastern, Russian, Caspian, Turkish and Kurdish energy security issues. He has lectured widely on a variety of subjects, including the development of

Arctic oil and gas, the impact of social and political unrest in the Middle East and boundary disputes in the Caspian Sea.

Roberts has recently completed studies for the Atlantic Council on oil and gas in the Kurdistan Region of Iraq, on gas interconnectors in Europe, and on the development of Russia's Turkish Stream pipeline and its impact on the development of the Southern Gas Corridor to connect the Caspian to Europe. Private consultancy work has included investigation of investment conditions in Abu Dhabi and Saudi Arabia's Vision 2030 programme. He is currently preparing a study on the Russia-China-Turkmenistan gas triangle.



## ANNEX II – LIST of IENE’s CORPORATE MEMBERS

### IENE CORPORATE MEMBERS

As of the end of June 2020 IENE’s membership included some 1,100 members. Of these 350 are individual members, including full members and students, associates and honorary members, while 750 come from companies. The 85 companies listed below have accredited between them 750 individuals who are employed in various capacities by these companies.

- ABB A.E.
- AEGEAN FIRST COMPANY AFKO AE
- AERS (Energy Agency of Republic of Serbia)
- AES Bulgaria
- BLUE GRID GAS & POWER AE
- BP Hellenic Petroleum SA
- C & M ENGINEERING
- CENERGY S.A.
- CORAL A.E.
- Corinth Pipeworks SA
- Cyprus Energy Regulatory Authority (CERA)
- DESFA (Hellenic Gas Transmission System Operator S.A)
- DNV GL
- EDF EN HELLAS SA
- EGNA Law Firm
- ELIN Verd
- ELINOIL- Hellenic Petroleum Company SA
- ELPEDISON
- ALPIQ ENERGY HELLAS AE
- ASPROFOS
- Athens International Airport SA
- Athens Water Supply and Sewerage Company (EYDAP S.A.)
- Bank of Greece
- ELVAL AE
- ENCOS HELLAS ΕΠΕ
- ENEL GREEN POWER TRADING AE
- ENEL ROMANIA
- ENERGEAN OIL & GAS
- ENERGY EXEMPLAR
- ENERTA (Commercial and Service Company)
- ENFINITY ENERGY GREECE ΕΠΕ
- ENSCO A.E.
- EUDITI
- Eurobank SA
- Gas Distribution Company Attica
- Gas Distribution Company Thessaloniki – Thessalia SA
- GOLDECO A.E.

- |   |  |
|---|--|
| ➤ Grant Thornton  | ➤ NORTON ROSE FULBRIGHT LLP                          |
| ➤ Greek Natural Gas Energy Company SA                             | ➤ Operator of RES & Guarantees of Origin (DAPEEP SA) |
| ➤ HEDNO (Hellenic Electricity Distribution Network Operator S.A.) | ➤ PE Electric Power Industry of Serbia               |
| ➤ Hellenic Cables SA  | ➤ PHOTOS PHOTIADES GROUP Ltd                         |
| ➤ Hellenic Energy Exchange (HEnEx)                                | ➤ PPC Renewables                                     |
| ➤ Hellenic Exchange SA  | ➤ PricewaterhouseCoopers (PWC)                       |
| ➤ Hellenic Hydrocarbon Resources Management (HHRM)                | ➤ Promitheas GAS SA                                  |
| ➤ Hellenic Petroleum SA   | ➤ Public Gas Corporation (DEPA) SA                   |
| ➤ Hellenic Union of Industrial Consumers of Energy (UNICEN),      | ➤ Public Power Corporation (PPC) SA                  |
| ➤ Heron Thermoelectric SA   | ➤ Romania Energy Center (ROEC)                       |
| ➤ Independent Power Transmission Operator (IPTO)                  | ➤ ROTA A.E.  |
| ➤ INTERNATIONAL TECHNOLOGICAL APPLICATIONS (ITA) AE               | ➤ SIEMENS A.E.                                       |
| ➤ KG Law Firm   | ➤ SPECTRUM GEO Ltd (UK)                              |
| ➤ LDK CONSULTANS  | ➤ SRIBJAGAS (Serbia)                                 |
| ➤ M & M Gas SA  | ➤ SUNLIGHT RECYCLING AE                              |
| ➤ MCKINSEY COMPANY LTD  | ➤ SYSTEMS SUNLIGHT SA                                |
| ➤ Messaritis Renewables SA  | ➤ TERNA ENERGY                                       |
| ➤ MOTOROIL HELLAS SA  | ➤ TRANSADRIATIC PIPELINE – TAP                       |
| ➤ Mytilineos Group SA   | ➤ TRITOXO PROJECT MANAGEMENT                         |
| ➤ NAFTA INDUSTRIA SRBJE (NIS) (Serbia)                            | ➤ VOLTON ΕΛΛΗΝΙΚΗ ΕΝΕΡΓΕΙΑΚΗ ΑΕ                      |
| ➤ National Bank of Greece (NBG)                                   | ➤ VTT Vasiliko Ltd                                   |
| ➤ Navridis & Partners Law Firm                                    | ➤ Zenith SA  |
|   | ➤ E3 Modelling                                       |
|   | ➤ EUROASIA INTERCONNECTOR                            |
|   | ➤ ENTEKA A.E.  |

## ANNEX III – List of IENE’s Sponsors and Supporters

### Sponsors and Supporters

Over the last years IENE’ work has been financially supported by a group of companies and organizations who sometimes as Sponsors and other times as supporters have assisted the Institute in carrying out studies and organizing events. The list of IENE’s Sponsors and Supporters is as follows:

#### Regular Sponsors and supporters

- |   |   |
|---|---|
| ➤ Independent Power Transmission Operator (IPTO or ADMIE) S.A.    | ➤ PROMETHEUS GAS S.A.                   |
| ➤ Public Gas Corporation DEPA S.A.                                | ➤ Regulatory Authority for Energy (RAE) |
| ➤ Public Power Corporation (PPC)                                  | ➤ TERNA ENERGY S.A.                     |
| ➤ PPC RENEWABLES  | ➤ Aegean Airlines                       |
| ➤ HEDNO (Hellenic Electricity Distribution Network Operator S.A.) | ➤ ALSTOM                                |
| ➤ DESFA (Hellenic Gas Transmission System Operator S.A)           | ➤ Elpedison                             |
| ➤ UNICEN S.A.   | ➤ Energean Oil & Gas                    |
| ➤ ELVAL S.A.  | ➤ ENSCO AE                              |
| ➤ Hellenic Energy Exchange (HENEX GROUP) S.A.                     | ➤ ENEL Green Power                      |
| ➤ Hellenic Petroleum (HELPE) S.A                                  | ➤ Gastrade A.E.                         |
| ➤ Attiki Gas Supply Co. S.A.                                      | ➤ KG Law Firm                           |
| ➤ Mytilineos S.A  | ➤ Protergia SA                          |
|   | ➤ Siemens SA                            |
|   | ➤ Systems Sunlight                      |

## Annex IV – IENE’s Research Work & Studies

The following is a detailed list of IENE’s studies conducted over the past years. This list includes completed studies as well as others which are in progress.

### ➤ Completed Studies (2007-2019)

- “National RES Targets Over the Next Five Years”, published, April 2007 (M01)
- “The New Landscape of Greece’s Electricity Market”, February 2008 (M02)
- “The Critical Role of Transport in Energy”, July 2009 (M04)
- “The Energy Security Policy of the Islamic Republic of Iran”, December 2009 (M05)
- “SE Europe Energy Outlook 2011”, an IENE Reference Study, June 2011 (M06)
- “Greece’s Petroleum Dependency: an Economic Perspective”, July 2013 (M07)
- “Renewable Energy Sources in SE Europe: Current Situation and Future Prospects”, published as Working Paper No.19, October 2012 (M08)
- “Energy and Employment in Greece”, an IENE Research Project, December 2013 (M09)
- “Europe’s Natural Gas Supply Prospects, the South Corridor and the Role of Greece”, an IENE Assessment Study, January 2012 (M10)
- “The Helios’ Project: Can Solar Energy be Exported?” an IENE Assessment Study”, February 2012 (M11)
- “Greece’s experience in utilizing EU Structural Funds for improving energy efficiency in buildings”, an IENE Research Note, January 2015 (M13)
- “Hydrocarbon Exploration and Production in the East Mediterranean & the Adriatic Sea” an IENE Review Paper, May 2012 (M14)
- “A Strategy Study on the Electricity Interconnections of SE Europe and Greece’s Role”, an assessment study carried out on behalf of Greece’s Regulatory Energy Authority (RAE), November 2012 (M15)
- “SE Europe’s Hydrocarbon Import Dependency”, a Research Note, 2017 (M16)
- “The Role of Greece as a Supply Route to Europe in View of Latest Gas Discoveries in the East Mediterranean”, a Research Note, December 2012 (M17)
- “Gas Storage in SE Europe and the Role of LNG”, an IENE Study, carried out on behalf of Greece’s Regulatory Energy Authority (RAE), March 2015 (M18)
- “The Outlook for a Natural Gas Trading Hub in SE Europe”, an IENE Research Project, September 2014 (M19)
- “SE Europe Energy Outlook 2016/2017”, an IENE Reference Study, May 2017 (M23)
- “A Strategy for Unlocking Greece’s Hydrocarbon Potential”, a Strategy Study, September 2015 (M25)
- “The Vertical Gas Corridor: From the Aegean to the Baltic”, a Study Project carried out with the support of Greece’s Public Gas Corporation (DEPA), May 2015 (M26)
- “Review of Turkey’s Nuclear Programme”, Briefing Note No. 6, June 2015 (M27)

- “The Energy Sufficiency of Kastellorizo” a research project completed July 2019 (M45)
- “Gas Supply in SE Europe and the Key Role of LNG” January 2018, (M46)
- “Prospects for the Development of an Electric Vehicles Market in Greece and the SE European Region and Opportunities for Commercial Exploitation”, completed July 2018 (M47)
- “Global Energy Markets in Transition and the Role of Electricity Storage: Prospects and Challenges”, an IENE Study, first part completed in September 2017 (M48)
- “The Greek Energy Sector-Developments and Prospects”, Annual Review, February 2018 (M48)
- “Prospects for the Establishment of Gas Trading Hubs in SE Europe” (M49)
- IENE Annual Report for 2019 on Greece’s Energy Sector, February, 2019, IENE (M03)
- “The Integrated Electricity Markets in Greece and SE Europe, the Role of the International Electricity Interconnections and the Impact on Industry”, April 2020, IENE (M54)
- “Long-Term Gas Contracts”, May 2019, IENE (M55)
- Greece - Cyprus in the New Energy Era – A Special IENE Publication, June 2019, IENE

#### ➤ Studies in progress (2019-2020)

- “The Role of the Caspian and Black Seas in European Energy Security”, an IENE Research Project, in progress (M12)
- “Energy Review of SE European countries: Greece “, to be published as Country Profile, in progress (M20)
- “The East Mediterranean Energy Corridor” an IENE Study Project, in progress, to be also published as a Research Note, in progress (M21)
- “Energy and Transportation in Greece”, revised study (originally published by IENE in 2009) to be published revised, in progress (M22)
- “Developing Albania’s Hydroelectricity Sector”, an Assessment Study, completed, June 2016, to be published as Working Paper, in progress (M24)
- “Developing a competitive electricity sector in Greece and the role of island interconnections”, A Strategy Study, (based on a Study which IENE originally carried out on behalf of the Regulatory Energy Authority in 2012) (M28)
- “Demonstrating Low Cost Energy Efficiency Techniques and Systems for Buildings in SE Europe”, A Review Study, in progress (M29)
- “A Strategy for Reducing Industrial Tariffs in Electricity and Natural Gas”, in progress (M30)
- “Trends and Prospects of RES in Greece” (M31)
- “East Mediterranean Gas Resources and Export Options”, to be published as Working Paper, in progress (M33)

- “Energy, Investment and Employment in Greece 2017” - (An Update of the study M09 issued in December 2013) will be issued as Working Paper, in progress (M34)
- “Energy as the Basic Economic Development Lever Greece in the 21st Century”, an IENE Study (M35)
- “European Gas Supply and the Role of the East Mediterranean’s”, A multiclient study project carried out with the support of companies active in the East Med region, in progress (M36)
- “A Carbon Capture Storage and Utilization (CCS/CCU) Proposed Strategy for the Public Power Corporation (PPC)”, An IENE Strategy Study, in progress (M37)
- “SE Europe Energy Barometer”, a multiclient IENE Market Research Project, to be conducted in co-operation with the Energy Institute (EI) of the UK, in progress (M38)
- “Energy Review of SE Europe Countries: Turkey”, to be completed and published as Country Profile, in progress (M39)
- “New Gas Transition Routes in SE Europe”, an assessment study to be published as an Assessment Study, in progress (M40)
- “The Weaknesses and Challenges of the Refining Sector in the SE Mediterranean and SE Europe Region” (M41)
- “Energy Efficiency Study in the Building Sector in SE Europe: with Special Reference to Greece” (M42)
- “The Role of RES in the Economic Development of the Greek Archipelago. Current Status, Examples and Prospects” (M43)
- “Prospects for an Expanded South Corridor” (M44)
- “SE Europe Energy Outlook 2020/2021” (M48)
- “Investing in Greece’s Energy Sector” (M49)