

The American College of Greece
September 21 - 24, 2022

17th IAEE European Energy Conference

The Future of Global
Energy Systems

ORGANIZED BY:

IAEE
International Association for
ENERGY ECONOMICS

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Conference Report

PROGRAM OUTLINE

Athens, September 21 - 24, 2022

17th IAAE
European
Energy
Conference

The Future of Global
Energy Systems

INSTITUTIONAL PARTNER



HOSTED BY



ORGANIZED BY:



CONFERENCE AGENDA

#IAEE2022ATH

Day 1 | Wednesday, September 21, 2022

13:00-18:30	Registration	Events Hall (ACG)
14:00- 18:30	PhD Day Seminars	Events Hall (ACG)
19:00-20:30	Welcome Reception	Open Air Theatre
21:00-23:00	Athens Happy Hour	City Center

Day 2 | Thursday, September 22, 2022

09:00-17:00	Registration	Pierce Theater Patio (ACG)
10:00-10:30	Welcome & Opening remarks	Pierce Theatre (ACG)
10:30-10:40	One-on-One Discussion	Pierce Theatre (ACG)
10:40-13:45	Plenary Sessions	Pierce Theatre (ACG)
14:00-15:00	Poster Session 1	Pierce Theatre (ACG)
15:00-15:10	MIT Awarded case study: Intelligence & Energy Efficiency	Pierce Theatre Patio (ACG)
15:10-17:00	Plenary Sessions 5-6	Pierce Theatre (ACG)
17:00-18:30	Concurrent Sessions 1-15	Pierce Classrooms (ACG)
20:00-21:00	Private guided tour	Acropolis Museum
21:00-23:00	Gala Dinner	

Day 3 | Friday, September 23, 2022

09:00-17:00	Registration	Pierce Theater Patio (ACG)
10:00-10:45	Plenary sessions 7-10	Pierce Theatre (ACG)
13:00-14:00	Poster Session 2	Pierce Corridor (ACG)
14:00-17:00	Plenary sessions 11-14	Pierce Theatre (ACG)
17:00-18:30	Concurrent Sessions 1-15	Pierce Classrooms (ACG)
20:00-20:30	Art Exhibition by Kostas Spiropoulos	Stavros Niarchos Foundation Cultural Center
21:00-23:00	Dinner Award ceremonies	Stavros Niarchos Foundation Cultural Center

Day 4 | Saturday, September 24, 2022

10:00-11:30	Concurrent Sessions 1-12	Alba Grad. Business School (ACG))
11:30- 12:30	Plenary Session 15	Alba Grad. Business School (ACG)
12:30-12:40	Closing Remarks	Alba Grad. Business School (ACG)
14:00	Acropolis Hill Tour	

Summary

The 17th IAEE European Energy Conference ‘The Future of Global Energy Systems’, held between 21-24 September, Athens, Greece, was a landmark in HAEE’s agenda of events. The four-day conference was a meeting point for over 400 attendees and speakers from the industry, international institutions, the research community, policy makers, PhD students and other key actors in the energy sector. Their contribution through exchanging their knowledge, convictions, and research findings, was tremendous and key to the conference’s success.

On the first day of the conference the welcome reception was held for all attendees and two seminars were also held addressed to PhD students. The second day commenced with the welcome and opening remarks by:

Spiros Papaefthimiou, HAEE President; Professor, technical University of Crete

David G. Horner, President, The American College of Greece

Kostas Axarloglou, Dean, Alba Graduate Business School

Peter Hartley, IAEE President; George A. Peterkin Professor at Rice University.

Fatih Birol, Executive Director, International Energy Agency

The speakers, each in their own turn in heartwarming speeches, welcomed all attendees highlighting that it was the first IAEE European conference with physical attendance after the turmoil caused by the Covid pandemic and that living in unprecedented and challenging times, the Conference took place at a time when it was most relevant and topical. That although there were alarming signs of energy security, focus on the progress in RES technologies should continue especially since it is the only way forward and that at current times RES energy has become cheaper compared to conventional fossil and other fuels. All in all, it was stated that energy efficiency needs to be promoted and energy security to be ensured both for industry and society and that to live up to these challenges, the role of investors is important as large investments are needed in RES technologies, storage, hydrogen, e-mobility and others, and all the above under the umbrella of concerted efforts by stakeholders and policymakers.

During the course of the Conference, 15 plenary sessions were held with over 70 speakers, 2 poster sessions, and 42 concurrent sessions with more than 170 research papers presented.

Attendees also had the opportunity to network and get acquainted with the Greek culture through the organized social events: the Athens Happy Hour, the Private Guided Tour at the Acropolis Museum, the Gala Dinner at the Acropolis Museum Restaurant, the Art Exhibition by Konstantinos Spiropoulos, the Dinner at the Lighthouse, Stavros Niarchos Foundation Cultural Center and the Acropolis Hill Tour.

On the last day of the Conference, and after the end of the day's planned plenary and concurrent sessions, the President of HAEE Spiros Papaefthimiou at his closing remarks, handed the baton to Carlo Di Primio, President of the Italian Association for Energy Economics, the host of the 18th IAEE European Conference *The Global Energy Transition: Toward Decarbonization*, Milan, Italy, 2023.

PhD Day

PhD Day

The first day of the conference included the PhD day which was addressed to, primarily but not exclusively, (PhD) students and young professionals. It comprised of two seminars:

Seminar 1 'Online Energy Market Trends and Drivers' was presented by K. Tsagarakis, Professor of Economics of Environmental Science and Technology in the Department of Production Engineering and Management, Technical University of Athens, assisted by G. Tsironis, Ph.D. Candidate, Democritus University of Thrace. The main objective of the seminar was to show participants how to access readily available data shared in LinkedIn in energy related company profiles, and how this data can be collected and handled to produce regional analysis reports and scientific publications.

Seminar 2 'Exploring Public Interest Trends in Energy Topics using Google search Traffic Data' was presented by A. Mavragani, PhD Researcher, University of Sterling, with analysis demonstrated by T. Daglis, Post-Doctoral Researcher, National Technical University of Athens.

The objective of the seminar was to show the participants how they can investigate the EU public interest in energy topics using Google Trends and to assist them to better understand the approaches and tools that can be employed to qualitatively and quantitatively analyze such data.



Plenary Sessions

PLENARY SESSIONS

ONE-ON-ONE DISCUSSION

Aristotelis Chantavas, Head of Europe Area, Enel Green Power; President, SolarPower Europe (*online*)

with

Spiros Papaefthimiou, HAEE President; Professor, Technical University of Crete

PLENARY 1: REPOWERING THE EU ENERGY SECTOR BY 2030 AND BEYOND

Chair: **Kostas Andriosopoulos**, CEO, Akuo Energy Greece; Professor of Energy Economics, Audencia Business School

Speakers: **Alexandra Sdoukou**, General Secretary of Energy and Mineral Resources, Ministry of Environment and Energy, Hellenic Republic

Yiannis Yiarentis, President and CEO, DAPEEP

Sotiris Kapellos, Chief Operating Officer (COO) – BoD Member, Hellenic Petroleum Renewable Energy Sources S.A.

Giannis Karydas, Chief Executive Officer, Renewable and Battery Storage Business Unit, Copelouzos Group

PLENARY 2: GREEN ENERGY TRANSITION DURING THE UNPRECEDENTED ENERGY CRISIS: IS IT TIME TO STEP BACK OR MOVE FORWARD?

Chair: **Carlo Bollino**, Professor, Universities of Perugia and LUISS; Visiting Researcher, KAPSARC; Honorary President, Italian Association for Energy Economics (AIEE)

Speakers: **Andreas Poullikkas**, Chairman, Cyprus Energy Regulatory Authority

Christophe Bonnery, Programme Director, Paris School of Economics; President, French Association for Energy Economics

Apostolos Petropoulos, Energy Modeller, World Energy Outlook Team, International Energy Agency (*online*)

Panagiotis Doulas, Director and Member of the Executive Committee, Howden

PLENARY 3: RES AT THE FOREFRONT OF ENERGY SECURITY AND AFFORDABLE ENERGY COSTS

Chair: **Michael Pollitt**, Professor of Business Economics, Cambridge Judge Business School

Speakers: **Eric Scotto**, Chairman and Co-Founder, Akuo Energy

Pierre-Arthur Lestrade, VP Europe, EDF Renewables

Konstantinos Eleftheriadis, Partner, Deloitte Greece

PLENARY 4: ENERGY MARKETS IN THE EU: WHAT PRICING MECHANISMS SHOULD WE ADOPT MOVING FORWARD?

Chair: **Victor Grigorescu**, Former Minister of Energy, Romania

Speakers: **Alex Papalexopoulos**, CEO & President, ECCO International, Inc. USA; CEO & Chairman of the Board, ZOME Energy Networks, Inc. USA

Septimiu Rusu, Development Manager, Romanian Commodities Exchange

Nikos Frydas, Principal, Energy Advisor, Grant Thornton

Emmanouil Kalaitzakis, Director, Strategy & Business Development, EnExGroup

MIT AWARDED CASE STUDY: ARTIFICIAL INTELLIGENCE & ENERGY EFFICIENCY

Michalis Manis, CEO, Ensign

Apollonas Konstantopoulos, COO, Ensign

PLENARY 5: SMART INFRASTRUCTURE: A VEHICLE TO TACKLE THE ENERGY CRISIS AND ENERGY POVERTY

Chair: **Spiros Papaefthimiou**, HAEE President; Professor, Technical University of Crete

Keynote Speakers:

Kostas Ach. Karamanlis, Minister of Infrastructure and Transport, Hellenic Republic

Matthew Lodge, British Ambassador to the Hellenic Republic

Speakers: **Maria Spyraiki**, Member of the European Parliament, Nea Dimokratia Party

Ioannis Mitropoulos, General Manager, Fysiko Aerio-The Hellenic Energy Company

Markus Popp, Brand Director, Omexom

Soteris Kalogirou, Editor-in-Chief, Renewable Energy Journal; Professor, Cyprus University of Technology

PLENARY 6: USA-EU ENERGY COOPERATION: RETHINKING GLOBAL ENERGY SECURITY

Chair: **Olga Khakova**, Deputy Director for European Energy Security, Global Energy Center at Atlantic Council

Speakers: **Gulmira Rzayeva**, Senior Research Fellow, Oxford Institute for Energy Studies (*online*)

John Jimison, President, Energy Future Services, Inc.

PLENARY 7: CLEAN ENERGY PROJECTS: INVESTMENT MAGNETS AND INNOVATION DRIVERS

Chair: **Dimitris Pefanis**, Director of Financial and Business Content, DPG Digital Media

Keynote Speakers:

George J. Tsunis, United States Ambassador to the Hellenic Republic

Adonis Georgiadis, Minister of Development and Investments, Hellenic Republic

Speakers: **Pavlos Mylonas**, CEO, National Bank of Greece

Manos Manousakis, Chairman and CEO, Independent Power Transmission Operator

PLENARY 8: GAS AS A MAINSTAY OF SECURITY OF SUPPLY: PROSPECTS AND CHALLENGES

POWERED BY GLOBAL GAS CENTER

Chair: **Naji Abi-Aad**, Senior Consultant and Author on Middle East Oil and Gas Issues

Speakers: **Julidé Yasar-Sonjoux**, General Director, France Gaz Maritime

Panayiotis Mitrou, Global Gas Segment Director, Lloyd's Register

Thierry Bros, VP Policy & Research, Tellurian

PLENARY 9: HYDROGEN AND ALTERNATIVE FUELS: THE GREEN 'SILVER BULLET' OR DISTANT HOPE?

Chair: **Anne Neumann**, Professor, NTNU, Dept. of Industrial Economics and Technology Management; Research Director NTNU Energy Transition Initiative

Speakers: **Mariarosa Baroni**, President, NGV Italy (*online*)

Panagiotis Grammelis, Director of Research, Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas

Constantinos Papalucas, Energy Expert, Coordinator of the National Hydrogen Committee, Ministry of Environment & Energy

PLENARY 10: WINTER IS COMING IN THE MIDST OF A “PERFECT STORM” IN THE ENERGY SECTOR – POLICIES AND MEASURES

Chair: **Nevenka Hrovatin**, Professor of Economics, University of Ljubljana; VP, SAE

Speakers: **Majid Al Moneef**, Chairman, International Advisory Committee of King Abdullah Petroleum Studies and Research Center (KAPSARC)

Clara Poletti, Chair of the Agency for the Cooperation of Energy Regulators (ACER); Board Member at ARERA

Boyko Nitzov, Senior Associate Fellow, Energy and Climate Program, CSD

Georg Erdmann, Professor, Institute for Energy Technology, Berlin University of Technology; Past President, IAEE

Yanos Michopoulos, Course Leader, New Energy Business School

PLENARY 11: ENERGY CRISIS: THE DAMOCLEAN SWORD OVER THE EUROPEAN ECONOMY

Chair: **Haris Doukas**, Associate Professor, School of Electrical and Computer Engineering, National Technical University of Athens (NTUA); General Secretary, HELORS

Speakers: **Ioannis Ghikas**, Deputy Permanent Representative of Greece to the EU (*online*)

Vicente Hurtado Roa, Head of the Energy Taxation and other Indirect Taxes Unit, European Commission, Belgium (*online*)

Miguel Palacios, Professor of Management & Executive Education Associate Academic Dean, ESCP Business School

Adonis Yatchew, Professor of Economics, University of Toronto; Editor-in-Chief, The Energy Journal

PLENARY 12: ELECTRICITY NETWORKS: THE SPINE OF THE ENERGY SECTOR’S DECARBONIZATION

Chair: **Georgios Papaefthymiou**, Principal Power System Operation and Security, ELIA GRID International

Speakers: **Adam Sieminski**, Senior Advisor to the Board, KAPSARC

Vasilis Georgiou, Managing Director, Protasis

Charles Mason, Associate Dean for Research, University of Wyoming; Editor-in-Chief, Economics of Energy and Environmental Policy Journal

PLENARY 13: A BRAVE NEW ENERGY WORLD

Chair: **Kostas Andriosopoulos**, CEO, Akuo Energy Greece; Professor of Energy Economics, Audencia Business School

Speakers: **Nikos Tsafos**, Chief energy adviser to the Prime Minister of Greece

Maria Rita Galli, CEO, DESFA

Leonidas Drollas, Independent energy consultant (*online*)

Bassam Fattouh, Director, Oxford Institute for Energy Studies; Professor, School of Oriental and African Studies, University of London (*online*)

PLENARY 14: THE NEW REALITY IN RES INVESTMENTS

Chair: **Thomas Lamnidis**, Managing Director, Lamnidis Law

Speakers: **George Kremlis**, Principal Advisor on Energy, Climate and Circular Economy Issues to the Greek Prime Minister (*online*)

Panayiotis-Peter Contis, CEO Advisor, Ameresco

Stefanos Lialios, Country Manager Greece - Cero Generation

Konstantinos Zygouras, Group CEO, SUNEL Group

Anastasios Tosios, Deputy CEO, EYDAP

PLENARY 15: THE NEW PATHWAYS FOR A SUSTAINABLE ENERGY TRANSITION

Chair: **George Ioannou**, Professor, Athens University of Economics and Business

Speakers: **Stijn Van Hummelen**, Managing Director, Cambridge Econometrics (Belgium)

José Maillet, Head of Gaia, Audencia Business School (online)

Fereidoon Sioshansi, President, Menlo Energy Economics

Cem Avci, Professor, Bogazici University; Director of Energy Policy Research Center and TRAEE Board Member

PLENARY PROCEEDINGS

Plenary 1: On repowering the EU Energy sector by 2030 and Beyond the new Greek strategic plan to address the crisis with new investments in RES and the contribution of the Recovery and Resilience Fund was presented. A plan which will include higher targets, aligned with the European legislation, Fit for 55 and the REPower EU and initiatives involving the simplification of the RES licensing process, the removal of barriers, as well as the overcoming of technical restrictions (e.g., grid upgrades) that hamper the integration of new RES projects into the country's electricity system. The future of RES was also discussed and how clean technologies and policies are needed to remove any barriers, and that it is necessary to increase their penetration by solving the challenge of intermittency through the introduction of storage solutions. The contribution of electrical interconnections to the strengthening of Europe's energy security was also discussed.

Plenary 2: On whether it is time to step back or move forward with energy transition during the unprecedented energy crisis, it was indicated that the energy crisis can be seen as an opportunity or a threat depending on the impact it has on each country, each country's conditions and how they perceive energy transition. The speakers, however, did agree that overall, the energy crisis is a driving force that will accelerate energy transition and that to face it the use of fossil fuels has to continue under the conditions that it is seen as a short-term solution, that RES investments and penetration of EV increase, energy efficiency is promoted, and the development of the hydrogen market is accelerated.

Plenary 3: On RES being at the forefront of energy security and affordable energy costs it was concluded that the extensive use of renewables and the digitalization of energy systems is a one-way street to tackle the energy crisis with a prerequisite of the diversification of RES technologies, an increase in wind, solar and hydro storage, a good cooperation between the public and the private sector, the creation of a solid PPA market, all under a strategy vision that will ensure affordable energy prices for society.

Plenary 4: On what pricing mechanisms should be adopted by the EU Energy Markets it was supported that they should implement and emulate the way the US market works. That there is a need to avoid relying on one fuel only, but also to focus on RES. Europe needs to implement a system to mitigate the market power for the offers that come to the market system and absorb the high prices through price shockers to avoid blackouts or shortages. It is important to have a clear picture of the whole market and not just focus on the problem area. The reason for this view is that when an attempt is made for a problem to be fixed, another is created, especially in energy markets. Reference was also made to the "wins" of the energy market, such as the "target model", which should not be completely abolished, and the need to implement well-designed measures to balance the energy market. Finally, it is important for Europe's energy markets to avoid a cascade of inefficient interventions because this causes additional problems. It is important to redesign the electricity market and to achieve greater liquidity.

Plenary 5: On smart infrastructure as a means to tackle the energy crisis and energy poverty, reference was made on Greece's transformation into a smart logistics hub through the increasing role of the railway network and ports, and the planned 'green' projects that are underway funded by the Recovery and Resilience Fund. The adequacy of the electric grid is an issue that must be resolved across Europe to boost electromobility, public and private participation is needed for the development of smart infrastructure in major cities but also social acceptance and personal participation for its implementation. Emphasis was also given on the recording and understanding, in a systematic way, the needs of different types of consumers to implement 'intelligent' solutions but also the role of AI and IoT technologies in creating conditions for energy use optimization and consequently the rationalization of the corresponding costs.

Plenary 6: On the USA-EU Energy cooperation on global energy security During an interesting debate, references were made to the energy security and efficiency of the electricity and LNG transmission system in the US and Europe. The aim of high energy efficiency can be achieved through improved products and services, appropriate product design, and inventions that are used more efficiently. This goal can be achieved through international cooperations. The issue of meeting the demand for natural gas in Europe was also raised. An alternative "easy" way to supply Europe with LNG is to supply it from eastern countries outside the European Union. However, if Europe wants to secure the required amount of natural gas or LNG (Energy security), investments should be made in countries that are already in the EU, such as Cyprus or Greece, or that are closely cooperating with these countries. In general, it is obvious that if the US and Europe want to ensure their energy security then appropriate actions must be taken by them to set an example for the rest of the world. Finally, in this critical period of risks and opportunities, Greek companies such as Hellenic Hydrocarbons and Energy Resources Management Company are expanding their activities in new sectors, such as offshore wind energy.



Plenary 7: On clean energy projects as investment magnets and innovation drivers, it was discussed that Greece has a great potential as an energy hub in SE Europe and as a large exporter of green energy, and that priority should be given to investments in renewable energy production by fast acting investors. Energy transition in Greece, should occur through the substitution of oil and through achieving a larger share of electricity production from renewable sources, with a prerequisite of a large amount of investments in infrastructure projects, RES generation and storage, interconnection and energy upgrading of industry and households. In this, the banks as well as the Recovery and Resilience Fund play a major role.

Plenary 8: On the prospects and challenges of Gas as a mainstay of security of supply it was argued that countries such as Israel, Egypt, Syria, and Cyprus will play a crucial role in the coming years in terms of gas supply to Europe. The sector that faces major challenges in terms of energy transition is the maritime, because LNG is considered a more suitable fuel than biofuels (biomethane, ammonia, etc.) and bio-LNG due to the high energy demand (electricity) required for their production, the unclear regulatory framework, and the low maturity of the energy markets as regards the use of clean-zero-emission fuels. Europe should invest in countries that are able to meet the gas demand, in technologies that can produce advanced and greener LNG and in CO₂ capture technologies. These steps must be taken as soon as possible if Europe wants to avoid the next energy crisis or to overcome this situation more quickly.

Plenary 9: On whether green hydrogen and alternative fuels should be seen as the green 'silver bullet' or a distant hope, special reference was made to the importance of IPCEI hydrogen projects for the energy transition in Greece and the potential of the country as a hydrogen hub under the condition that we live up to challenges associated with its cost, production, transportation and storage. It was emphasized that the development of a new hydrogen market is required to be developed, and mature at a stage where private funding will play a major role with minimum state aid needed. Special reference was also made on EU and National policies and strategies for the development of a green hydrogen economy, such as the US Clean Hydrogen Strategy Road Map and the recently announced European Hydrogen Bank by the president of the European Commission Ursula von der Leyen, which purpose is to invest 3 billion euros to help build the future market of hydrogen.



Plenary 10: On **policies and measures for the ‘perfect storm’ in the energy sector expected this winter**, the speakers agreed that as each EU member state is affected differently by the energy crisis, it would be difficult for the EU to respond coherently. It was also a common perspective that a lot of attention has been placed on energy security on the side of the consumer but little on that of the producer and supplier. While many countries have tried to alleviate the consequences of the energy crisis through various policies, only few of them have undertaken measures to enhance and adjust their wholesale markets in the new geopolitical landscape. Therefore, new rules, new improvements and long-term reforms are essential to design elastic and resilient electricity and gas markets but also management solutions which may involve tough decisions are also needed if we want to achieve long-term targets

Plenary 11: On **the threat of the energy crisis on the European economy**, the speakers pointed out that high inflation rates in Europe are attributed to the Covid pandemic and its consequences, aggravated by the recent geopolitical developments and the subsequent energy crisis. At an EU level it was recognized that that each country’s individual circumstances and conditions makes difficult for all EU member states to agree on a common ground regarding measures to alleviate high energy prices. However, EU members have already agreed to lower gas consumption by 15%, with some members already having achieved this target, to carry out common gas purchases and to reform the electricity market in the long term, in order to decouple electricity prices. Additionally, measures such as the reduction of VAT and excise duties have been taken to offer relief to the vulnerable population groups that were most affected. At a national level, Greece has successfully implemented a model of taxing extremely high marginal windfall profits from electricity producers in order to subsidize vulnerable households and enterprises, while using windfall taxes to prevent a bigger budget deficit.

Plenary 12: On the **electricity networks as the spine of the energy sector’s decarbonization**, it was mentioned that the long-term goals are focused not to have zero emissions but net zero emissions. The 4R principles: Reduce, Reuse, Recycle and Remove are crucial towards this direction. The role of TSO-DSO is essential, especially when the grids are transforming from passive to dynamic. Intermittency is a key issue facing solar and wind energy. Natural gas could close this energy production gap, considering an inelastic energy demand. Furthermore, a wide portfolio of renewable energy systems could mitigate a possible supply-demand deficit.

Plenary 13: On the emergence of a new energy world, it was stated that Greece should be seen as a lighthouse for Europe, as the way it approaches the divergence of tariffs from different technologies in the electricity sector is achieved by using windfall profits to support consumers. It was highlighted that for a Smart Energy System, the behavior of consumers must be considered, since they determine the demand for energy and electricity. Greece, compared to other European countries, needs to upgrade its electricity generation system. Also, the question of how Europe will be able to secure the required quantities of energy together with the green energy transition remains a hot topic. The energy crisis should be seen as an opportunity for every country at a political level, and especially for energy experts, they should start taking a more unified approach and identify solutions. The key to having low gas prices is to manage the balance between supply and demand and this will happen through cooperation between politicians and energy experts.

Plenary 14: On the new reality in RES investments, it was concluded that a stable regulatory environment is needed so that the market will operate smoothly with minimum government's intervention and minimum reliance on public capital expenditure. Also, the potential opportunities for scale partnerships through PPAs was highlighted, although the current, respective legislative framework in Greece cannot adequately support them.

Plenary 15: On the new pathways for a sustainable energy transition, it was discussed that as the only way forward is the decarbonization of the economy, short-term and long-term decisions should be looked at either an integrated way or the success of short-term targets can only guarantee the success of the long-term ones. Among others, it was highlighted that although there is a plethora of tools that have been developed and a great body of research, these do not reach policymakers. Finally, it was concluded that price volatility and energy supply uncertainty should be seen as an opportunity to accelerate change, that energy efficiency is key against energy vulnerability and that until we have large scale batteries in place, and better interconnections, natural gas will continue to affect electricity prices.



Concurrent Sessions



During the Conference, **42 Concurrent sessions** took place with **171 research papers** presented on the subjects of renewables, petroleum, electricity, natural gas, nuclear energy, transportation, energy efficiency, energy & the environment, energy & the economy, energy security & geopolitics, energy investment and finance, and energy modelling. The sessions' presenters represented predominantly universities and institutions, mostly European but also from across the globe.

Click [here](#) to download the Conference Proceedings



Concurrent Sessions

DAY 1

Session 1: Petroleum

[Oil spot price forecasting with variable uncertainty: a review of some novel methods](#) | Author & Presenter: Krzysztof Drachal

[An International Comparison of OPEC Announcements Effect on Stock Indices](#) | Authors: Constantin Mellios, Amine Loutia & Kostas Andriosopoulos | Presenter: Amine Loutia

[Macroeconomic Indicators and Stock Price: An Empirical Analysis on the United States Listed Oil Enterprises](#) | Authors: Kostas Andriosopoulos, Kyraki Kosmidou, Dimitrios Kousenidis, Ioannis Negakis & Victoria Patsika | Presenter: Dimitris Kousenidis

Session 2: Natural Gas

Designing a model for the cost-optimal decommissioning and refurbishment investment decision for gas networks: application on a real test bed in Austria until 2050 | Authors: Hans Auer & Sebastian Zwickl-Bernhard | Presenter: Sebastian Zwickl-Bernhard

A note on the effectiveness of supply-side climate policies in the European natural gas market | Authors: Daan Hulshof & Machiel Mulder | Presenter: Daan Hulshof

EU liberalization policies and natural gas prices: Understanding the current energy crisis | Author & Presenter: Roberto Cardinale

How dependent are European electricity systems and economies on natural gas? | Authors: Christina Kockel, Lars Nolting, Kevin Pacco, Carlo Schmitt, Albert Moser & Aaron Praktijnjo | Presenter: Christina Kockel

Session 3: Nuclear Energy

Early nuclear power plant phase-out and nuclear decommissioning funds in the New York electricity market | Authors: Muhammad Maladoh Bah & Hannes Weigt | Presenter: Muhammad Maladoh Bah

Invention, innovation, and diffusion of nuclear reactor technologies: a multi-level analysis applied to the nuclear sector of the United States | Authors: Fanny Böse, Björn Steigerwald & Christian von Hirschhausen | Presenter: Fanny Böse

Nuclear bias in energy scenarios – a review and results from an in-depth analysis of long-term decarbonization scenarios | Authors: Jens Weibezahn, Björn Steigerwald, Christian Breyer & Christian von Hirschhausen | Presenter: Björn Steigerwald

Nuclear in a decarbonized European power system: Insights from a capacity expansion and power system simulation model | Authors: Arthur Lynch, Yannick Perez, Sophie Gabriel, Gilles Mathonnière, Sergio-Leo Vargas-Aranda & Valentin Stage | Presenter: Arthur Lynch

Session 4: Electricity 1

[Energy community ex-post electricity and cost allocation in practice – the Austrian example](#) | Author & Presenter: Bernadette Fina

[Impacts of traffic data on day-ahead residential load forecasting](#) | Authors: Aksornchan Chaianong, Christian Winzer & Mario Gellrich | Presenter: Aksornchan Chaianong

[Deployment of industry-flexibility for TSO-DSO coordinated redispatch in Austria](#) | Authors: Regina Hemm, Tara Esterl, Helfried Brunner, Barbara Herndler, Sawsan Henein, Sophie Knöttner, Christian Schützenhofer, Sarah Wimmer, Viktor Zobernig | Presenter: Regina Hemm

[The impact of energy transition on local grid costs and consequences for yardstick regulation: empirical analysis for the Netherlands](#) | Authors: Floris van Montfoort, Peter T. Dijkstra & Machiel Mulder | Presenter: Floris van Montfoort

Session 5: Electricity 2

[Agent modeling of terre and mari balancing markets to study the economic impact of market order standardization](#) | Authors: Florent Cogen, Fabien Roques, Frédéric Bienvenu & Virginie Dussartre | Presenter: Florent Cogen

[Decarbonizing the industry sector and its effect on electricity transmission grid operation - implications from a modelbased analysis for Germany](#) | Authors: Martin Lieberwirth & Hannes Hobbie | Presenter: Martin Lieberwirth

[Combining congestion management methods in near real-time balancing platforms](#) | Authors: Marie Girod, Efthymios Karangelos, Emily Little, Viktor Terrier, Virginie Dussartre, Jean-Yves Bourmaud, Oualid Jouini & Yannick Perez | Presenter: Marie Girod

[Integration of electric vehicles into transmission grids: A case study on the generation-load adequacy in Europe in 2040](#) | Authors: Rémi Lauvergne, Yannick Perez & Mathilde Françon | Presenter: Rémi Lauvergne

Session 6: Renewables 2

Renewables expansion and supporting infrastructures for a net-zero energy system transition of Germany by 2050 | Authors: Mengzhu Xiao, Shima Sasanpour, Hedda Gardian, Sonja Simon, Carina Harpprecht & Thomas Pregger | Presenter: Mengzhu Xiao

Wind power development in Germany: spatial planning instruments and externality trade-offs | Authors: Charlotte Geiger, Paul Lehmann, Philip Tafarte, Elisabeth Wolfram | Presenter: Philip Tafarte

Bringing power to the people of Uganda: determinants of solar photovoltaics adoption in Uganda | Author & Presenter: Grace Alinaitwe

Spatial analysis of the effects of the dismantling of end-of-life wind turbines in Germany | Authors: Imke Rhoden, Stefan Vögele & Andrew Ross | Presenter: Imke Rhoden

Session 7: Renewables 2

Optimization of wave overtopping in nearshore wave energy converter systems | Authors: George Romosios & Theofanis Karambas | Presenter: George Romosios

Economic assessment of district heating potentials in EU-27 countries | Authors: Mostafa Fallahnejad, Lukas Kranzl, Marcus Hummel & Andreas Müller | Presenter: Mostafa Fallahnejad

Two-stage stochastic optimization of district heating and cooling system investment and dispatch with high shares of geothermal sources and aquifer thermal energy storage | Authors: Sebastian Zwickl-Bernhard & Hans Auer | Presenter: Marcus Otti

Spatial clustering of renewable timeseries for region generation in European electricity expansion planning models | Authors: Kristof Phillips, Jorge A. Moncada, Hakan Ergun & Erik Delarue | Presenter: Kristof Phillips

Session 8: Energy & the Environment 1

Investigation of citizens' attitudes towards energy transition. Evidence from the region of Western Macedonia – Greece | Author & Presenter: Maria Spyraiki

Building a climate resilient Hellenic electricity distribution network: impact assessment of extreme weather events through case study analysis, mitigation interventions and adaptation best practices based on lessons learnt from international experience | Authors: Aikaterini Gkika, Dr. Efstratios Zacharis, Asterios Zafeirakis & Dr. Efthymios Lekkas | Presenter: Aikaterini Gkika

Development of a methodological framework for enhancing the resilience of military infrastructure against climate change impacts/case study: 116 Combat Wing, Araxos, Ahaia, Greece | Authors: Ilias Manolis, Dr. Athanasios Sfetsos, Pr. Christos Makropoulos & Antonios Skouloudis | Presenter: Ilias Manolis

What if Canada were an EU member? Canadian hydrogen policy in a European context | Author & Presenter: André Plourde

Economic and environmental aspects of biomass-based gases for the transport and energy sectors in the European Union | Authors: Frank Radosits, Amela Ajanovic & Reinhard Haas | Presenter: Frank Radosits

Session 9: Energy & the Environment 2

How much are individuals willing to pay to offset their carbon footprint? the role of information disclosure and social norms | Authors: Joachim Schleich & Sven Alsheimer | Presenter: Joachim Schleich

Modelling Germanies energy transition within a 1.5°C-CO2-budget | Authors: Patrick Jürgens, Julian Brandes, Markus Kaiser & Christoph Kost | Presenter: Patrick Jürgens

Optimal selection of greenhouse gas emissions abatement measures under uncertainty: the case of Cyprus | Authors: Marios Karmellos, Chryso Sotiriou & Theodoros Zachariadis | Presenter: Marios Karmellos

Did Covid-19 change the decarbonization path? a panel VECM approach | Authors: Gonçalo Toscano Rico, Margarida Catalão-Lopes & Inês Carrilho-Nunes | Presenter: Inês Carrilho-Nunes

Towards an Effective Methane Emissions Management: Monitoring, Reporting and Verification | Author & Presenter: Maria Spyraiki

Session 10: Energy Efficiency 1

Assessing the effect of green taxation of private cars on economic welfare in Israel | Authors: Yanai Ankaoua, Ofir D. Rubin, Stav Rosenzweig & Aviv Steren | Presenter: Yanai Ankaoua

High speed rail and sustainable mobility: a life cycle assessment of the Spanish AVE network | Authors: Andoni Kortazar, Gorka Bueno & David Hoyos | Presenter: David Hoyos

Price and cross price elasticities of energy carrier specific demand in the residential sector | Author & Presenter: Anita Thonipara

Impact of energy labels on selecting houses of consumers: an experiment on flaming effects of information | Authors: Mieko Fujisawa & Yukihide Kurakawa | Presenter: Mieko Fujisawa

Session 11: Energy Efficiency 2

How the pace of residential heat electrification impacts the energy system? | Authors: Christian F. Calvillo, Antonios Katris, Oluwafisayo Alabi, Jamie Stewart, Long Zhou & Karen Turner | Presenter: Christian F. Calvillo

What impacts the strength of perceived barriers and drivers to energy efficiency in manufacturing small and medium-sized enterprises | Authors: Janez Dolšak, Nevenka Hrovatin & Jelena Zorić | Presenter: Janez Dolšak

Retrospective panel data study of energy-efficient retrofits: the relevance of social capital and housing-related lifestyle | Authors: Ivana Jovović, Andreja Cirman, Nevenka Hrovatin & Jelena Zorić | Presenter: Ivana Jovović

Information is power: the combined effect of regulators and retailers' actions to improve consumer welfare in residential energy markets | Authors: Hester Huisman, Evert de Haan, Machiel Mulder & Jaap Wieringa | Presenter: Hester Huisman

Session 12: Transportation 1

Economics of sustainable hydrogen-fuels for trucking, shipping, and aviation | Authors: Jonas Martin, Anne Neumann & Anders Ødegård | Presenter: Jonas Martin

On the energy economics of green hydrogen for driving fuel cell passenger cars | Author & Presenter: Amela Ajanovic

The competition of zero-emission vehicle technologies in road freight | Authors: Bessie Noll, Tobias S. Schmidt & Bjarne Steffen | Presenter: Bjarne Steffen

A common methodology for fuel price comparison at a common unit aligned with EU consumers perception | Authors: Antonis Peppas, Aristomenis Skyllakos, Chrysa Politi, Ilias Pasios & Sotirios Kottaridis | Presenter: Antonis Peppas

Session 13: Energy & the Economy 1

The aggregate effects of the structure of information in low-carbon transition policies: an empirical application | Authors: Darius Corbier & Frédéric Gonand | Presenter: Darius Corbier

Interaction of dynamic pricing and local market considering distribution networks with high PV penetration | Authors: Yucun Lu, Jelle Meus & Erik Delarue | Presenter: Yucun Lu

An econometric analysis of the impact of auctions on innovation in solar PV | Authors: Pablo Del Río González & Leticia García-Martínez | Presenter: Pablo Del Río González

Decarbonisation of industry and flexibility for the power system: technical, economic and regulatory potentials and limitations of the use of green hydrogen in the industry sector in Germany | Authors: Marius Tillmanns, Jan Priesmann & Aaron Praktiknjo | Presenter: Marius Tillmanns

Session 14: Energy Security & Geopolitics 1

Security analysis of generation shift key methods in the European day ahead market | Authors: Emily Little, Efthymios Karangelos, Jean-Yves Bourmaud, Nicolas Lhuillier & Yannick Perez | Presenter: Emily Little

An analysis of driving factors of CO2 emissions by final energy consumption in Africa | Authors: Eunhye Lee & Daegon Cho | Presenter: Eunhye Lee

System adequacy assessment for Switzerland: How flow-based market coupling affects a non-FBMC neighbor | Authors: Ali Darudi, Moritz Schillinger, Jonas Savelsberg, Ingmar Schlecht & Hannes Weigt | Presenter: Ali Darudi

Directional spillovers between electricity and fossil fuel prices in a hydrothermal power generation market: the case of Brazil and Canada | Authors: Andrés Oviedo-Gómez, Sandra Milena Londoño-Hernández & Diego Fernando Manotas-Duque | Presenter: Andrés Oviedo-Gómez

Session 15: Energy Modelling 1

Making the EU carbon border adjustment mechanism acceptable and climate friendly for least developed countries | Authors: Sigit Perdana & Marc Vielle | Presenter: Sigit Perdana

Carbon tax with alternative tax-design schemes for Ethiopia: a general equilibrium analysis | Authors: Govinda R. Timilsina & Samuel Sebsibie | Presenter: Govinda R. Timilsina

Estimating the value of distributed demand side management technologies in Central Western Europe - assessing regional differences in view of locational pricing mechanisms | Authors: Hendrik Kramer, Florian Boehnke & Christoph Weber | Presenter: Hendrik Kramer

Asymmetric product with linked bids for the Swedish balancing market? Case study from a hydro-dominated market | Authors: Ksenia Poplavskaya, Stefan Strömer, Johann Mayr & Niclas Damsgaard | Presenter: Ksenia Poplavskaya

Concurrent Sessions

DAY 2

Session 1: Electricity 3

[Environmental impacts of redispatching in the decarbonized electricity systems](#) | Authors: Daniel Davi-Arderius & Tim Schittekatte
| Presenter: Daniel Davi-Arderius

[Adoption of distributed energy resources under uncertainty: Incorporating insights from prospect theory into an agent-based model](#) | Authors: Jorge Andrés Moncada & Erik Delarue | Presenter: Jorge Andrés Moncada

[New technology adoption: advanced metering infrastructure strategic implementation planning using fanp](#) | Authors: Erny Anugrahany & Athor Subroto | Presenter: Erny Anugrahany

[The impact of vector coupling on prices questions thoroughly the economics of the power system](#) | Authors: Marie-Alix Dupré la Tour, Virginie Dussartre, Marc Le Du & Philippe Quirion | Presenter: Marie-Alix Dupré la Tour

Session 2: Electricity 4

Dissemination potential in Germany of peer-to-peer energy trading and local electricity markets as an option of decentralized energy system | Authors: César De Jesús & Niklas Hartmann | Presenter: César De Jesús

Assessing the potential of demand response as a source of flexibility in low-carbon power systems: insights from the French case | Authors: Julien Ancel & Olivier Massol | Presenter: Julien Ancel

Mid-term electricity price forecasting: the role of fundamental drivers | Authors: Niaz Bashiri Behmiri, Carlo Fezzi & Francesco Ravazzolo | Presenter: Niaz Bashiri Behmiri

Energy demand and carbon emissions reduction potential of dynamic pricing of electricity: systematic review and meta-analysis of experimental evidence | Authors: Tarun Khanna, Jan Minx & Klaas Miersch | Presenter: Tarun Khanna

Session 3: Renewables 3

The impact of fluctuating renewables on flexibility needs in electricity systems | Authors: Franziska Schöniger, Ulrich Morawetz, Gustav Resch & Reinhard Haas | Presenter: Franziska Schöniger

A novel approach for supporting the strong uptake of wind energy in Austria | Authors: Gustav Resch & Franziska Schöniger | Presenter: Gustav Resch

Monte Carlo simulation-based economic risk assessment in energy communities | Authors: Klara Maggauer, Bernadette Fina & Carolin Monsberger | Presenter: Klara Maggauer

Conditions for competitive, sustainable and democratic electricity systems | Author & Presenter: Reinhard Haas

Session 4: Renewables 4

[Severity of variable renewably energy droughts in Europe](#) | Author & Presenter: Martin Kittel

[Economic analysis of pumped hydro storage](#) | Authors: Marlene Sayer, Reinhard Haas & Amela Ajanovic | Presenter: Marlene Sayer

[Flexibility of hydropower in Colombia to balance the growing share of intermittent renewables](#) | Authors: Sara Restrepo Echeverri & Camila Ochoa | Presenter: Sara Restrepo Echeverri

[Unlocking Indonesia potential resources to achieve net zero emission 2060: Generation expansion planning using leap](#) | Authors: Satria Putra Kanugrahan & Dzikri Firmansyah Hakam | Presenter: Satria Putra Kanugrahan

Session 5: Energy & the Environment 3

[Digital transformation of the energy system – country specific strategies for market implementation of technologies](#) | Author & Presenter: Philipp Riegebauer

[Regulation of CCS transportation infrastructures: insights from a bi-level optimization problem](#) | Authors: Adrien Nicolle & Olivier Massol | Presenter: Adrien Nicolle

[Why do mitigation pathways differ? The role of scenario assumptions and model features](#) | Authors: Jim Skea, Richard Green, Alaa Al-Khourajie, Raphael Slade & Lain Staffell | Presenter: Richard Green

[Trading of renewable targets – who wins and who loses](#) | Authors: Jan Abrell, Sebastian Rausch & Jonas Savelsberg | Presenter: Jonas Savelsberg

Session 6: Energy & the Environment 4

Policies for accelerating the decarbonisation of the European cement industry | Authors: Paul Tautorat, Natalija Ljubić, Bjarne Steffen & Tobias S. Schmidt | Presenter: Paul Tautorat

The importance of building export capacity in a new Scottish CO2 transport and storage industry: Alleviating domestic funding pressures and securing green growth and jobs transition | Authors: Antonios Katris, Karen Turner, Oluwafisayo Alabi, Christian Calvillo, Jamie Stewart & Julia Race | Presenter: Antonios Katris

From Kyoto to Glasgow: Volumes and types of unused Certified Emission Reductions (CERs) | Authors: Raphaela Kotsch & Regina Betz | Presenter: Raphaela Kotsch

Decarbonisation strategies implementing biochar as a carbon capture technology | Authors: Meritxell Domènech Monfort, Anna Sandhaas & Niklas Hartmann | Presenter: Meritxell Domènech Monfort

Session 7: Energy Efficiency 3

Flexible energy system integration using concept development and demonstration for rural district heating networks in Austria | Authors: Demet Suna, Nicolas Pardo-Garcia, Christian Fuchs, Carolin Monsberger, Ralf-Roman Schmidt & Josef Petschko | Presenter: Demet Suna

Beyond energy efficiency: do consumers care about life cycle properties of household appliances? | Authors: Mark Olsthoorn, Antoine Durand, Corinne Faure, Marie-Charlotte Guetlein & Joachim Schleich | Presenter: Mark Olsthoorn

How choice complexity in liberalized markets hurts the demand for green electricity | Authors: Rebekka Bärenbold, Manuel Grieder & Renate Schubert | Presenter: Rebekka Bärenbold

Energy storage investment in Switzerland: a household model approach coupling heat and electricity | Authors: Héctor Ramírez Molina, Arthur Rinaldi, Benjamin Schroeteler & Hannes Weigt | Presenter: Héctor Ramírez Molina

Session 8: Energy Efficiency 4

[Willingness to pay for energy retrofits by homeowners and landlords](#) |

Authors: Jonas Bender & Heike Wetzel | Presenter: Jonas Bender

[Model-predictive control of a residential heating system with machine-learning based models, forecasts, and signal-processing](#) |

Authors: Oscar Villegas Mier, Sascha Niro, Federico Alpi, Rainer Gasper & Michael Schmidt | Presenter: Oscar Villegas Mier

[Evaluating the impact of road freight uberization on the trucking sector](#) | Authors: Xun Xu, Tianduo Peng, Zhandong Xu & Mi Gan |

Presenter: Xun Xu

[Can loss aversion explain the energy efficiency gap? A stated choice experiment](#) | Authors: Thilo K. G. Haverkamp & Andreas Ziegler

Presenter: Andreas Ziegler

Session 9: Transportation 2

[A spatio-temporal approach for EV charging infrastructure deployment](#) | Authors: Marc-Olivier Metais, Oualid Jouini, Yannick Perez, Jaâfar Berrada & Emilia Suomalainen | Presenter: Marc-Olivier

Metais

[Spatially distributed charging profiles for electric vehicles in Germany](#) | Authors: Menna Elsobki, Marius Tillmanns & Aaron Praktiknjo | Presenter: Menna Elsobki

[Spatio-temporal modeling of fast-charging along highway networks for stress-testing planned charging infrastructure capacity](#) | Authors:

Antonia Golab, Sebastian Zwickl-Bernhard, Theresia Perger & Hans Auer | Presenter: Antonia Golab

[Vehicle electrification as an alternative transport fuel technology - cost-effectiveness in reducing CO2 emissions](#) | Authors: Tamara Sheldon, Rubal Dua & Omar Abdullah Alharbi | Presenter: Rubal Dua

Session 10: Energy & the Economy 2

Easier Said than Done: A Supply-side critique of the EU's Plan to Eliminate Dependence on Russian Gas | Author & Presenter: Theodoros Tsakiris

The effect of hydrogen production growth to the renewable energy sector | Author & Presenter: Muhammad Akimaya

Demand response and curtailment in an isolated system with up to 80% variable renewables | Authors: Sarah Stanley, Lisa Ryan & Damian Flynn | Presenter: Sarah Stanley

Green bonds and the energy transition: Efficiency and social inequalities | Authors: Verónica Acurio Vásconez & Olivier Damette | Presenter: Verónica Acurio Vásconez

When the chips are down: an incentivized analysis of preferences for green electricity in Switzerland | Authors: Betz Regina, Grieder Manuel & Nicklisch Andreas | Presenter: Betz Regina

Session 11: Energy Access 1

Challenges and opportunities of clean cooking program in Indonesia: the journey to net zero emission | Authors: Dzikri Firmansyah Hakam, Satria Putra Kanugrahan, Dr. Raden Aswin Rahadi, Dr. Herry Nugraha & Dr. Agung Wicaksono | Presenter: Dzikri Firmansyah Hakam

What are consumers willing to pay for residential heating systems in Germany? | Authors: Jakob Kulawik, Christina Kockel & Aaron Praktijnjo | Presenter: Jakob Kulawik

Impact of rising energy prices on household income and energy consumption: Analysis of efficient relief measures for the case of Germany | Authors: Jan Priesmann & Aaron Praktijnjo | Presenter: Jan Priesmann

Carbon literacy – can simple interventions help? Effect of information provision on emissions knowledge of private households | Author & Presenter: Sandra Kretschmer

Session 12: Energy Security & Geopolitics 2

[Assessment of the impacts and substantial implications of high levels of decarbonization and clean energy by 2030 on power markets and network operations in Southeast Europe](#) | Authors: Elliot Roseman, Goran Majstrovic & Dragana Orlic | Presenter: Goran Majstrovic

[European economic impacts of cutting energy imports from Russia: a computable general equilibrium analysis](#) | Authors: Marc Vielle, Sigit Perdana & Maxime Schenckery | Presenter: Marc Vielle

[How can Germany avoid the next energy crisis? Impact of an import ban of Russian energy sources on climate protection goals in Germany](#) | Authors: Anas Abuzayed, Niklas Hartmann, Anna Sandhaas, Cesar De Jesus Tabora & Hanhee Kim | Presenter: Anas Abuzayed

[European Union's plan for a green transition – Unleashing a policy storm or a strategic guide through the energy transition in these new circumstances?](#) | Author: Laura Huomo & Cea Mittler | Presenter: Laura Huomo

[The EU's Southern Gas Corridor Strategy and the Eastern Mediterranean after the Second Russian-Ukrainian War: Pipelines and LNG](#) | Author & Presenter: Theodoros Tsakiris

Session 13: Energy Modelling 2

[Generation of industrial electricity and heat demand profiles for energy system analysis](#) | Authors: Anna Sandhaas, Hanhee Kim & Niklas Hartmann | Presenter: Anna Sandhaas

[Econometric analysis of reserve energy demand](#) | Authors: Laureen Deman & Quentin Boucher | Presenter: Laureen Deman

[How flexible electrification integrates fluctuating renewables](#) | Authors: Leonard Göke & Jens Weibezahn | Presenter: Leonard Göke

[The role of flexibility options in deep decarbonization of the European power sector](#) | Authors: Ozge Ozdemir, Anneke Vries, Paul Koutstaal & Lennart Bours | Presenter: Ozge Ozdemir

Session 14: Energy Investment & Finance 1

Reaching climate neutrality in an isolated energy system: The case of Cyprus | Authors: Constantinos Taliotis, Theodoros Zachariadis, Elias Giannakis, Nestor Fylaktos, Marios Karmellos & Despina Yiakoumi | Presenter: Constantinos Taliotis

Impact of current market distortions in commodity and energy markets on levelized costs of electricity of PV in Austria | Authors: Carolin Monsberger & Gustav Resch | Presenter: Carolin Monsberger

Scenarios for future trade flows of energy technologies | Authors: Jonas Eschmann, Marlene O'Sullivan & Thomas Baldauf | Presenter: Jonas Eschmann

The application of a new institutional economics framework to the process of decommissioning of nuclear power plants – determination of best practice approaches from France, Germany, and UK | Authors: Alexander Wimmers, Björn Steigerwald & Christian von Hirschhausen | Presenter: Alexander Wimmers

Session 15: Energy Modelling 3

Building-stock model based scenarios under different price signals | Authors: Ece Özer, Lukas Kranzl, Andreas Müller & Behnam Zakeri | Presenter: Ece Özer

Using the Shapley value to share costs of congestion management in a realistic power grid model | Author & Presenter: Simon Voswinkel

Piecewise Linearization and Linepack in Operation of Integrated Electricity and Gas Systems | Authors: Christian Peraus, Manuel Ruppert & Wolf Fichtner | Presenter: Christian Peraus

The marginal abatement costs of CO₂ emissions in the European chemical sector | Authors: Lennard Rekker, Machiel Mulder & Michaela Kesina | Presenter: Lennard Rekker

Concurrent Sessions

DAY 3

| Day 3

Session 1: Electricity 5

[Smart Market-based congestion management design for electricity markets](#) | Authors: Lukas Maximilian Lang, Jonas Egerer, Veronika Grimm & Ulrike Pfefferer | Presenter: Lukas Maximilian Lang

[Regional power system flexibility management under an energy transition scenario: The case of French region occitanie](#) | Author & Presenter: Théotime Coudray

[Analysis of electricity sources impact on Lithuania's electricity market price](#) | Authors: Mindaugas Cesnavicius & Inga Konstantinaviciute | Presenter: Mindaugas Cesnavicius

[Assessing flexibility demand and supply in the Austrian electricity market by 2020/2030](#) | Authors: Gerhard Totschnigg, Gustav Resch, Franziska Schöniger & Tara Esterl | Presenter: Gustav Resch

Session 2: Renewables 5

[Upscaling energy community potential to European level](#) | Authors: Theresia Perger & Hans Auer | Presenter: Theresia Perger

[Economic evaluation of onsite green hydrogen supply strategies for the industrial sector](#) | Authors: Jasmine Ramsebner, Pedro Linares, Reinhard Haas & Albert Hiesl | Presenter: Jasmine Ramsebner

[Solar prosumage: interactions with the transmission grid](#) | Authors: Christoph Weyhing, Wolf-Peter Schill, Dana Kirchem, Christian von Hirschhausen & Mario Kendzioriski | Presenter: Christoph Weyhing

[The Market Impact of Operational Risk Events in the Energy Sector](#) | Authors: Sofia Kalatha, Kyriaki Kosmidou, Panagiotis Dontis-Charitos & Kostas Andriosopoulos | Presenter: Sofia Kalatha

Session 3: Energy & the Environment 5

[Evaluating production processes and hydrogen supply routes for zero-emissions steelmaking in the EU](#) | Authors: Kimon Keramidas, Silvana Mima & Adrien Bidaud | Presenter: Kimon Keramidas

[CO2 removal and 1.5°C: Sharing the gains from inter-regional cooperation using a game-theoretic approach](#) | Authors: Emma Jagu1, Solène Chiquier, Olivier Massol & Niall Mac Dowell | Presenter: Emma Jagu

[Industrial use or storage of CO2? A compound real options valuation for the retrofitting of coal-fired power plants](#) | Authors: Qinghan Yu & Reinhard Madlener | Presenter: Qinghan Yu

[Techno-economic assessment of bio-based carbon dioxide removal using TIAM-FR](#) | Authors: Sophie Chlela & Sandrine Selosse | Presenter: Sophie Chlela

Session 4: Energy & the Environment 6

Energy and climate proposals in the Spanish white book on tax reform
| Author & Presenter: Xavier Labandeira

Quantifying climate change measures towards mitigation and adaption optimisation | Authors: Matthew Keller, Sebastian Dickler, Dr.-Ing Noah Pflugradt, Dr.-Ing Leander Kotzur & Univ.-Prof. Dr.-Ing Detlef Stolten | Presenter: Matthew Keller

Could investment in infrastructure soften the pollution haven hypothesis in developing countries? | Authors: Rafaela Caetano, António Cardoso Marques, Tiago Lopes Afonso & Isabel Vieira | Presenter: Rafaela Caetano

The resource curse and fossil electricity: resource rents and the democracy effect | Author: Zeynep Clulow & David Reiner | Presenter: Zeynep Clulow

Session 5: Energy Efficiency 5

Producing synfuels from CO₂, biomass, and hydrogen. Resources, routes, emissions, and economics: A European overview | Author & Presenter: Guillaume Boissonnet

What determines consumers' responsiveness to energy costs of durable goods? evidence from the Swiss appliance market | Authors: Adrian Obrist & Claudio Daminato | Presenter: Adrian Obrist

The effect of information and communication technologies on energy demand: evidence from OECD countries | Authors: Mona Chitnis, Steve Sorrell & Shivani Taneja | Presenter: Mona Chitnis

Predicting prosumers, rebounds and (pro-) environmental spillovers: the case of residential photovoltaic systems | Authors: Patrick Bigler & Benedikt Janzen | Presenter: Patrick Bigler

Session 6: Transportation 3

[A policy evaluation of electromobility in Germany](#) | Authors: Stefanie Wolff & Christopher Borger | Presenter: Stefanie Wolff

[Policy complementarities in the promotion of electric vehicles: subsidies and charging infrastructure](#) | Authors: Lavan Teja Burra, Stephan Sommer & Colin Vance | Presenter: Lavan Teja Burra

[The effect of different dynamic pricing schemes on the use of e-vehicle charging infrastructure](#) | Authors: Paul Fabianek, Ayse Tugba Atasoy & Reinhard Madlener | Presenter: Paul Fabianek

[Total cost of ownership analysis of battery electric buses for public transport system in a small to midsize city](#) | Authors: Hanhee Kim & Niklas Hartmann | Presenter: Hanhee Kim

Session 7: Energy Access 2

[Data-driven household's archetypes to classify building's owner budget restrictions on investing in deep renovation](#) | Authors: Iná Maia, Lukas Kranzl & Andreas Müller | Presenter: Iná Maia

[Combining simulation and optimization for optimal energy community planning with technology diversity and multiple objectives](#) | Authors: Miriam Schwebler & Bernadette Fina | Presenter: Miriam Schwebler

[Electricity grid tariffs for electrification in households: quantifying cross-subsidies across grid users](#) | Authors: Claire Bergaentzlé, Philipp Andreas Gunkel, Mohammad Ansarin, Yashar Ghiassi-Farrokhfal & Henrik Klinge Jacobsen | Presenter: Claire Bergaentzlé

[Reducing the risk of inc-dec gaming in redispatch. Comparative country analysis](#) | Authors: Viktor Zobenrig & Ksenia Poplavskaya | Presenter: Viktor Zobenrig

Session 8: Energy Security & Geopolitics 3

Decarbonization of the Costa Rican transport sector: exploring electrification pathways for 2050 | Authors: Héctor Ramírez, Muhammad Maladoh Bah, Dennis Schneider & Guido Godínez | Presenter: Dennis Schneider

Oil and gas between climate constraints and the need for energy and mobility | Author & Presenter: Jean-Pierre Favennec

Effects of Russian gas supply cut-off on the German gas transmission system | Authors: Lucas De La Fuente Munita & Dominik Möst | Presenter: Lucas De La Fuente Munita

Investigating energy productivity in Africa: impact of energy efficiency and economic structural change over 1990-2017 | Authors: Dr. Liu Yang & Dr. Brantley Liddle | Presenter: Dr. Liu Yang

Session 9: Energy Investment & Finance 2

A green alliance with the black continent: requirements to efficiently implement a joint hydrogen economy via public-private partnerships | Authors: Lena Schreiner & Prof. Reinhard Madlener | Presenter: Lena Schreiner

Financial transparency and cross-border mergers and acquisitions in the extractives industries | Authors: Şevkat Özgür Speitmann¹ & Raffael Speitmann | Presenter: Şevkat Özgür Speitmann

Bidding strategies of renewables in the Iberian electricity spot market | Authors: Silke Johanndeiter & Valentin Bertsch | Presenter: Silke Johanndeiter

Is transmission expansion for decarbonization compatible with generation competition? | Author & Presenter: Timothy Brennan

Session 10: Energy Investment & Finance 3

[Modeling the impact of oil price changes and investment decisions on construction wages in the U.S.](#) | Authors: Nyakundi Michieka, Noha H. A. Razek, Richard Gearhart, & Yiannis Ampatzidis | Presenter: Nyakundi Michieka

[The future of renewable energy auctions: model-based assessment of long-term trends in a changing electricity system](#) | Authors: Jasper Geipel, Gustav Resch & Florian Hasengst | Presenter: Jasper Geipel

[An analysis of the energy storage requirements of the Austrian federal state of Tyrol depending on transmission network capacities in 2050](#) | Author & Presenter: Florian Hasengst

[Estimation of external costs from short sea shipping. The concept of externalities surcharge](#) | Authors: Emmanouil Doundoulakis, Kostas Andriosopoulos & Spiros Papaefthimiou | Presenter: Emmanouil Doundoulakis

Session 11: Energy Modelling 4

[Exploring the mechanics of hybrid markets in a context of deep decarbonization](#) | Authors: Alexis Lebeau, Marcelo Saguan, Marie Petitot, Yannick Perez & Olivier Massol | Presenter: Alexis Lebeau

[Investment in a green-hydrogen system under economic and physical uncertainties](#) | Authors: Luis María Abadie & José Manuel Chamorro | Presenter: José Manuel Chamorro

[Efficient de-rating in modern capacity mechanisms and the interdependence with reliability metrics](#) | Authors: Paulo Brito-Pereira, Pablo Rodilla, Paolo Mastropietro, Luiz Augusto Barroso & Carlos Batlle | Presenter: Paulo Brito-Pereira

[The energy transition and the value of capacity remuneration mechanisms](#) | Authors: Cinzia Bonaldo, Fulvio Fontini & Michele Moretto | Presenter: Cinzia Bonaldo

| Day 3

Session 12: Energy Modelling 5

[Flexibility assessment for high shares of renewable energy](#) | Authors: Thomas Baldauf, Jens Schmugge, Hans Christian Gils & Jonas Eschmann | Presenter: Thomas Baldauf

[Trends and long-run relations in cointegrated time series observed with noise](#) | Authors: Matteo Pelagatti, Angelica Gianfreda, Paolo Maranzano & Lucia Parisio | Presenter: Lucia Visconti Parisio

[Nowcasting industrial production using linear and non-linear models of electricity demand](#) | Authors: Giulio Galdi, Roberto Casarin, Davide Ferrari, Carlo Fezzi & Francesco Ravazzolo | Presenter: Giulio Galdi

[Assessing the impact of a CO2 tax at the margin, combined with a subsidy scheme for the Dutch Industry](#) | Authors: Marit van Hout, Robert Koelemeijer, Bert Daniëls, Eline Ooms & Hidde Boom | Presenter: Marit van Hout

Athens, September 21 - 24, 2022

17th IAAE
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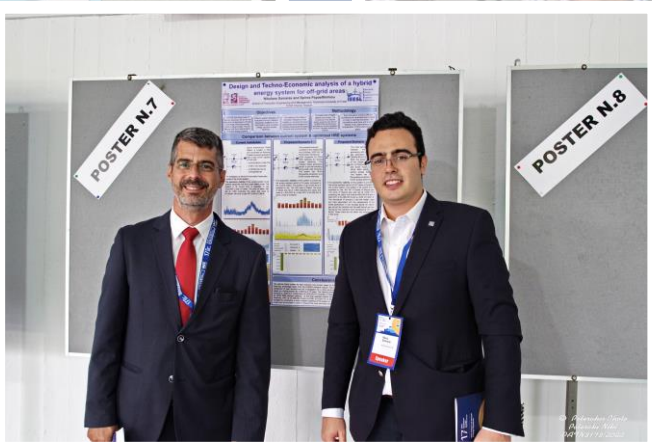
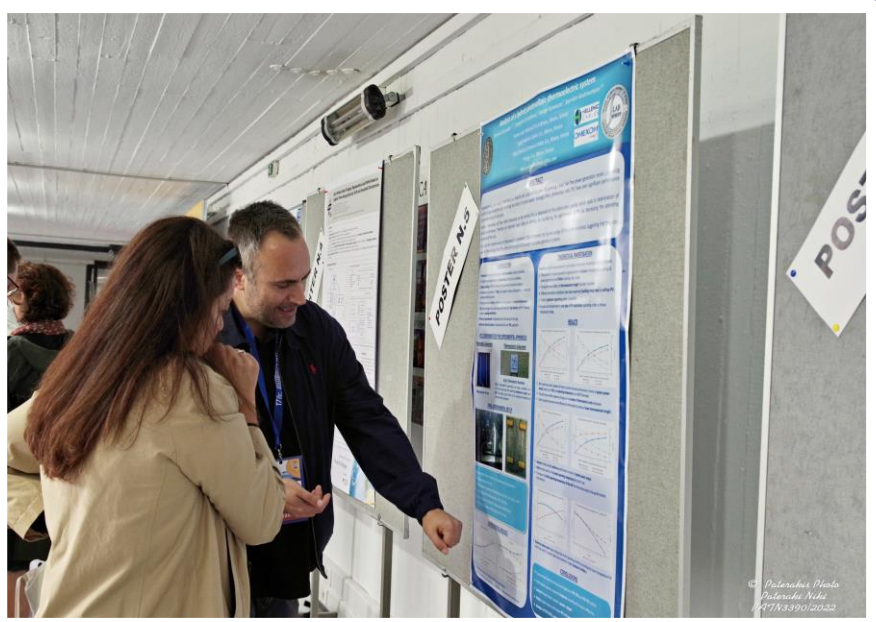
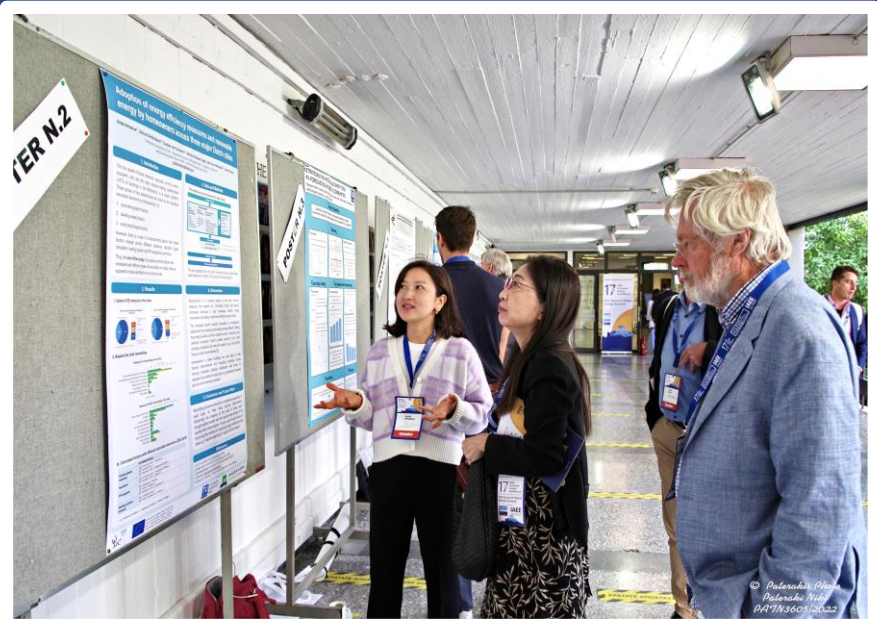
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Poster Session

Poster Session

Apart from the oral presentations, participants also had the opportunity to present their research in a form of a poster and were given the opportunity to engage with other attendees, share their research results and receive constructive feedback. Most posters focused on sustainable energy technologies



Poster Titles

“An assessment of High Efficiency Cogeneration in Italy, based on actual operation data”

Authors: Giuseppe Dell’Olio

Presenter: Giuseppe Dell’Olio

“Adoption of energy efficiency measures and renewable energy by homeowners across three major Dutch cities”

Authors: Ardak Akhatova, Erkinai Derkenbaeva, Eveline van Leeuwen, Solmaria Halleck Vega, Gert Jan Hofstede & Lukas Kranzl

Presenter: Ardak Akhatova

“Strategies for wide-scale short-term PV forecasting in energy communities”

Authors: Nikolaus Houben, Lennard Visser, Wilfried van Sark, Hans Auer, Amela Ajanovic & Reinhard Haas

Presenter: Nikolaus Houben

“Electric Vehicles Smart Charging: Representative Load Profiles Based on Residential Time-Varying Electricity Tariffs and Household Characteristics”

Authors: Fabia Miorelli, Ulrich Frey, Hans Christian Gils & Patrick Jochem

Presenter: Fabia Miorelli

“Analysis of a hybrid photovoltaic-thermoelectric system”

Authors: Dimitrios Kossyvakis, Evangelos Hristoforou, George Kavvouras & Spyridon Koutroumpas

Presenter: Dimitrios Kossyvakis

“A detailed life cycle assessment study of an intelligent and energy-autonomous greenhouse”

Authors: Evangelos Ntousakis, Konstantinos Loukakis, Spiros Papaefthimiou

Presenter: Spiros Papaefthimiou

“Design and Techno-Economic analysis of a hybrid energy system for off-grid areas”

Authors: Nikolaos Samaras & Spiros Papaefthimiou

Presenter: Nikolaos Samaras

“Development of sustainable processes for CO₂ transformation into value-added chemicals by means of renewable H₂”

Authors: E. Mandela, M. Lykaki, G. Varvoutis, A. Lampropoulos, D. Ipsakis, S. Papaefthimiou, G. Marnellos, M. Konsolakis

Presenter: M. Konsolakis

Social Events

Happy Hour

Participants had the opportunity to further network beyond the conference and have enjoyable moments during the organized social events.

On **Day 1**, conference participants had a taste of Athens' night life at the city center.



Gala Dinner

On **Day 2**, a 1-hour private guided tour was given at the Acropolis Museum. The day concluded with the Gala Dinner at the Acropolis Museum restaurant.





The night was highlighted by the HAEE's Annual Award Ceremony, where **Prof. Athanasios Dagoumas**, President of the Greek Regulatory Authority for Energy was awarded in recognition of his long-standing contribution towards a decarbonized, liberalized, and competitive Greek energy sector.

HAEE also awarded the **HELLENiQ ENERGY**. Mr. Spyros Kiartzis, received the award on behalf of the company, in recognition of the company's initiative to expand its core business activities with an emphasis on environmentally friendly sources, for a net-zero transition towards a sustainable future.



Art Exhibition by K. Spiropoulos



It was an honor for HAEE to host in the context of the 17th European Conference of IAEE, the art exhibition by K. Spiropoulos 'The secrets of Energy' at the Book Castle, Stavros Niarchos Foundation Cultural Center. The exhibition was inspired by the theme of the conference making the artworks unique and original as similarly themed works have not been presented before.

One of the most prominent representatives of pop art today in Greece, K. Spiropoulos in his artworks brings together exuberant figures, still life, landscapes, culture, civilization and technology, connected in a narrative way. His 'narratives' have traveled around the world and have been presented in individual and group exhibitions in Greece and abroad, in international Art fairs and international Biennales.



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Athens, September 21 - 24, 2022

17 IAAE
European
Energy
Conference



The art exhibition was followed by a dinner for all participants at the Lighthouse, Stavros Niarchos Foundation Cultural Center.

During the dinner, **3 different awards were given to Paper and Poster Presenters for new advances in the broad field of energy transition.** The International and Hellenic Associations for Energy Economics are always trying to award excellence; thus, the Awards are an inseparable part of the Program.

- **Best Paper Award Winner**
- **Best Student Paper Award Winner**
- **Best Poster Award Winner**



Mr. Stephen Littlechild, Fellow at Cambridge Judge Business School & Associate at the Energy Policy Research Group, was given by the IAAEE the annual Outstanding Contributions to The Profession Award for his contributions to the field of energy economics and its literature.



Watch the 17th IAEE European Energy Conference Aftermovie here!



Social Media Visibility

Social Media Analytics

(from 1 September to 1 October)



293 NEW FOLLOWERS

+380.3%



78K POST IMPRESSIONS

+1753.4%



1.7K SEARCH APPEARANCE

+400%

👉 Find us by using the Conference hashtag: [#IAEE2022ATH](https://twitter.com/IAEE2022ATH)

Social Media Posts (Conference)



25
live
speakers'
quotes



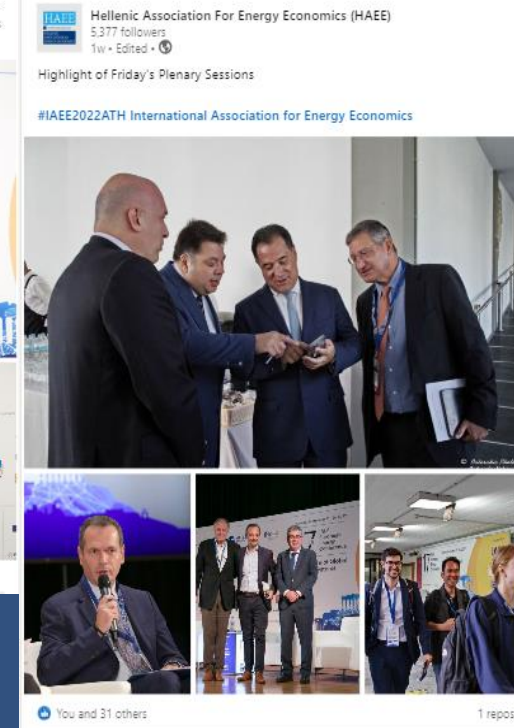
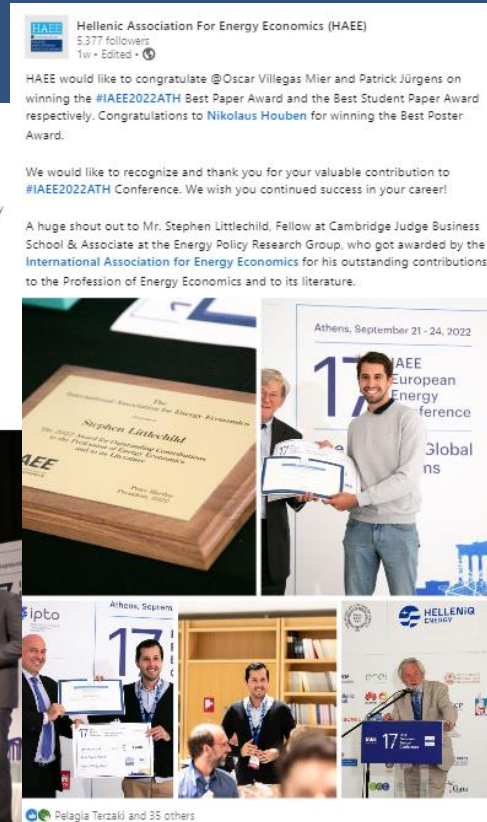
Live quotes from:

- Representatives of the Conference's sponsors
- Political leadership
- Leading academia

highlighting the speakers' speech key points to:

- gain traffic/ new audience
- engage our sponsors in the communication procedure
- advertise the Conference

Social Media Posts



Digital Media Analytics

(from 1 September to 1 October)

1

HAEF website



Pageviews: 15.183

Unique Pageviews: 12.042

2

To Βήμα– Banner Campaign

Impressions: 252.032

Clicks: 872

3

CNN News – 2 Banner Campaigns

Impressions: 159.681

Clicks: 132

4

Capital.gr - Banner Campaign -2 Articles

Banner Campaign Impressions: 235.148

Banner Campaign Clicks: 186

Articles Pageviews: 2.875

Unique Pageviews: 1.726

Digital Media Analytics

(from 1 September to 1 October)

5

Insider.gr - Banner Campaign - Newsletter

Banner Campaign Impressions: 39.620

Banner Campaign Clicks: 48

Newsletter Pageviews: 1.097

Unique Pageviews: 1.037

6

Energypress.gr

Banner Campaign - Articles

1041 total views

7

Naftemporiki- Banner Campaign - Article

Article Pageviews: 429

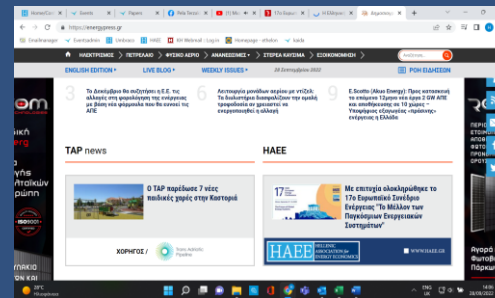
Banner Campaigns

Capital.gr

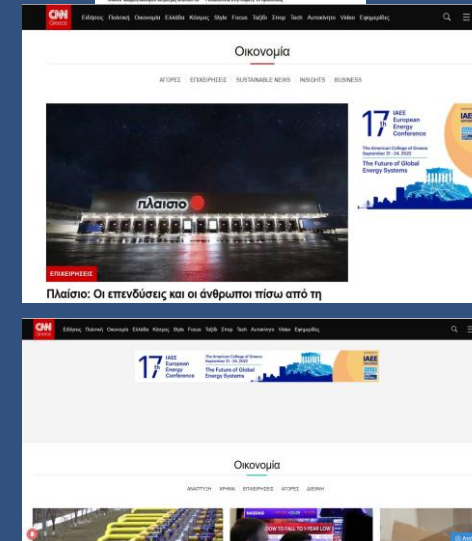
energypress
Δημοσιογραφικό ενημερωτικό portal για την ενέργεια

CNN
Greece

naftemporiki.gr



LIFO



Newsletters

Newsletter για την ενημέρωση σχετικά με τα Social Events του Συνεδρίου ([εδώ](#))

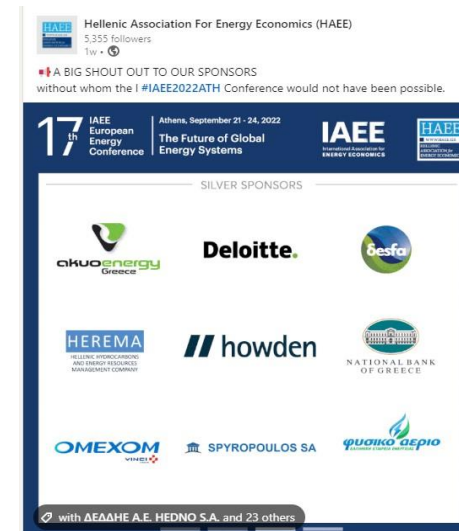
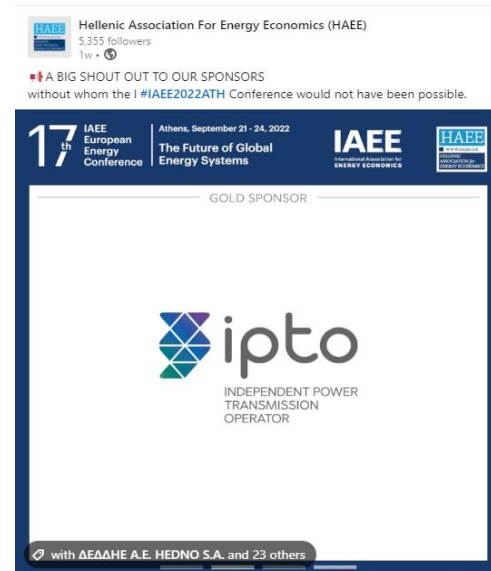
Δελτίο Τύπου το οποίο εστάλη προς όλα τα μέσα επικοινωνίας, ενεργειακά και μη, καθώς και αντίστοιχο Newsletter στη βάση επαφών της ΗΑΕΕ με 65.000 παραλήπτες ([εδώ](#))

Απολογιστικό Δελτίο Τύπου προς όλα τα μέσα, ενώ μπορείτε να δείτε [εδώ](#) και το σχετικό Newsletter, όπως απεστάλη στη βάση της ΗΑΕΕ (65k)

Opinion Articles - Interviews

1. [Οι τιμές-ρεκόρ του Αυγούστου προβληματίζουν ενόψει του δυσκολότερου ενεργειακού χειμώνα της Ευρώπης \(energypress.gr\)](#)
2. [Ο ενεργειακός γολγοθάς της ΕΕ: Μέτρα και πολιτικές για την αντιμετώπιση της κρίσης - CNN.gr](#)
3. [Εξοικονόμηση ενέργειας: Χρήσιμο εργαλείο ή πανάκεια στην αντιμετώπιση της ενεργειακής κρίσης; \(energypress.gr\)](#)
4. [Σπ. Παπαευθυμίου \(ΗΑΕΕ\): Να μη θυσιαστεί η πρόοδος των ΑΠΕ στο βωμό της ενεργειακής κρίσης - Απαραίτητη μια κουλτούρα εξοικονόμησης στο εξής \(energypress.gr\)](#)
5. [Η λεπτή ισορροπία ανάμεσα στις επιδοτήσεις και την εξοικονόμηση ενέργειας \(energypress.gr\)](#)
6. [Σπ. Παπαευθυμίου στο CNN Greece: Επιτακτική η επιτάχυνση πολιτικών εξοικονόμησης ενέργειας - CNN.gr](#)
7. [Ο αναγκαίος μετασχηματισμός των παγκόσμιων ενεργειακών συστημάτων στην Ενεργειακή Κρίση - CNN.gr](#)
8. [Η νέα πραγματικότητα στον ενεργειακό τομέα ενόψει του πιο δύσκολου χειμώνα των τελευταίων δεκαετιών | Insider](#)
9. [Το μέλλον των ενεργειακών συστημάτων \(naftemporiki.gr\)](#)
10. [Τα έξυπνα δίκτυα – καταλύτης στην μάχη της ενεργειακής κρίσης \(Μόνο Έντυπη – ΤΑ ΝΕΑ\)](#)

Social Media Sponsorship post



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Founded in 1998, HELLENiQ ENERGY (former HELLENIC PETROLEUM Holdings) is one of the leading energy groups in South East Europe, with activities spanning across the energy value chain and presence in six countries. HELLENiQ ENERGY's key shareholders are Paneuropean Oil and Industrial Holdings S.A. (47%) and the Hellenic Republic Asset Development Fund (35.5%), with the remaining held by institutional (8.5%) and private (9%) investors. The shares of HELLENiQ ENERGY Holdings S.A. are listed on the Athens Exchange (ATHEX: ELPE) with a secondary

listing on the London Stock exchange (LSE: HLPD), while the Group's international bond issue (HPF, 2%, 04 Oct 2024) is listed on the Luxemburg Stock Exchange. In 2021, Group Adjusted EBITDA amounted to €401m, on total revenues of €9.2bn.

Refining is the Group's core business, operating three out of the four refineries in Greece (Aspropyrgos, Elefsina, Thessaloniki), of 344 kbpd total capacity, with a 60% share of the Greek wholesale oil products market. The Group is the domestic ground fuels marketing leader, with a retail network of c.1,700 service stations throughout Greece as well as LPG, industrial, aviation and marine fuels and lubricants businesses. The Group is a leading player in SE European markets being one of the key fuels marketing players in Cyprus, Serbia, Bulgaria, Montenegro and Republic of North Macedonia through its network of over 300 petrol stations.

The Group is the sole petrochemicals producer in Greece, mainly active in the propylene-polypropylene value chain, commanding a >50% domestic market share, while exports, mainly in Turkey and other Mediterranean countries account for c. 70% of sales. Leading energy transition, HELLENiQ ENERGY has been investing in renewable energy sources with a portfolio of 340 MW in operation and more than 2 GW in various development stages. The Group's exploration and production activities are focused on Greece through developing an exploration portfolio at offshore areas, either independently or in collaboration with leading companies in the sector. HELLENiQ ENERGY is also active in the power and gas sectors. Power generation and trading activities are carried out through ELPEDISON, a JV with EDISON, which owns and operates two CCGT plants in Greece of a total capacity of 840 MW and is also present in the retail electricity market. The Group is also present in the wholesale, supply and distribution of natural gas through its 35% stake in DEPA Group.

Gold Sponsor



The Independent Power Transmission Operator (IPTO) is responsible for the operation, monitoring, maintenance and development of the Hellenic Electricity Transmission System, aiming to ensure safe and uninterrupted power supply across the country. IPTO's Ten Year Network Development Plan provides for the electrical interconnection of almost all Greek islands in the High Voltage System by 2029, the strengthening and modernization of the continental power grid as well as the facilitation of Greece's transition towards a cleaner energy mix. IPTO's 5-billion-euro investment program –among others- includes the emblematic Crete-Attica power link, the completion of Cyclades and Sporades interconnections and energy storage projects.

Silver Sponsors



Akua Energy is a French multinational company, based in Paris, active in the renewable energy sector worldwide. It operates in 18 countries and has been present in Greece since 2018. Akua Energy develops, manufactures and operates RES projects with major technologies such as wind, photovoltaic, as well as hydroelectric. So far the company has invested more than € 2.8 billion in RES projects worldwide. Its potential includes 1.4GW projects under operation, financing and construction as well as 7 GW projects under development. Akua Energy's presence in Greece signals the company's strong interest in the entire Balkan region as it has already completed significant investments in the area.

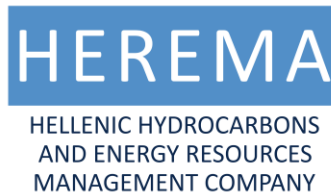
Deloitte.

Deloitte Greece is a member of one of the world's largest professional services networks, Deloitte Touche Tohmatsu since 1975. With offices in Athens, Thessaloniki, Heraklion and Patras and over 1,900 professionals, we combine an unmatched breadth and depth of capabilities in audit and assurance, consulting, financial advisory, risk advisory, tax and legal. Operating as a true multidisciplinary model we collaborate across businesses to solve the most challenging issues of our clients. We work with clients in every sector of the Greek economy to deliver innovative solutions using the latest tools and technologies. Our people are unified by a collaborative culture guiding them to lead the profession, to serve with integrity, to take care of each other and to foster inclusion. They enjoy an environment of continuous learning and opportunities and are dedicated to making a positive impact in their communities. In 2017, we launched Deloitte Alexander Competence Center in Thessaloniki, a hub for the development of specialized technical skills and competencies, aiming to capitalize on the abundant talent in Greece and reduce brain drain. In 2019 Deloitte Foundation was founded, a non-profit voluntary organization, to make an impact that matters through initiatives promoting education, culture, environment and relief in national emergencies. In 2022 Deloitte Digital launched its services in Greece, as part of Deloitte, constituting a combination of an end-to-end digital transformation agency with a consulting firm. Through a flexible and hands-on learning experience, the Deloitte Academy helps executives to develop their knowledge, upskill and connect with market industry leaders keeping them on top of global and local market trends and best practices. KBVL, member of the Deloitte Legal international network, is an independent law firm registered with the Athens Bar, that offers legal services aligned with clients' key business objectives.

Silver Sponsors



Desfa is responsible for the operation, management, utilization and development of the Greek Natural Gas System and its interconnections, in a technically sound and economically efficient way, in order to best serve its Users with safety, reliability and adequacy. Possessing extensive experience and a highly skilled workforce, Desfa, whose shareholders are, from 2018, 34% the Greek State and 66% Senfluga SA (joint company of Snam, Enagas, Fluxys and Damco), contributes decisively to the security of supply and the diversification of supply sources of Greece and the wider region, while facilitating the development of competition in the Greek energy market. On the way to a cleaner and more sustainable energy future, Desfa is transformed, with the vision of its further consolidation as a reliable partner in the framework of the ongoing international energy projects in Southeast Europe and beyond. At the same time, Desfa implements a series of significant investments for the upgrade, expansion and interconnection of the National Natural Gas System, with a key role for the smooth energy transition of Greece and the goal of its emergence as an international energy hub. On a consistent basis, Desfa also implements activities aimed at strengthening its positive social and environmental footprint, consistent in its vision to be a model of business excellence and corporate responsibility in every aspect of its operation.



The Hellenic Hydrocarbons and Energy Resources Management Company (HEREMA S.A.) manages the national interests in the field of exploration, research and production of hydrocarbons and works methodically in order to enable the development of national resources and especially natural gas, which can contribute to the economic and social development of Greece. HEREMA was founded in 2011 and its only shareholder is the Greek State. The new Board of Directors, appointed by the Greek government in the summer of 2020, consists of executives from the energy, legal, shipping and financial sectors with international experience in countries such as Norway, the United Kingdom, Cyprus, the Netherlands and of course Greece. The Board of Directors of the Company in collaboration with a team of experts in HEREMA, such as geologists, engineers, environmental scientists, lawyers and economists, implements the new vision of the company in the context of the energy transition.

Silver Sponsors



Howden Hellas has a long and successful history in the Greek insurance and reinsurance market, starting back in 2003 as BMS Hellas, rebranding in 2006 as Matrix Insurance & Reinsurance Brokers and since 2020 as a Howden broking Group company. With a vision to build a sustainable business for the future, Howden Hellas and Cyprus are fully aligned with the vision of the HBG. With more than 140 expert brokers, 850 large corporate clients, a team of claims lawyers & technicians, 4 offices in Athens, Thessaloniki, Ioannina, Herakleion (Crete) and Howden Cyprus, we are today the largest corporate insurance & reinsurance broker in both countries. Furthermore, Howden Hellas offers a specialized Financial Lines Team of nine (9) FI professionals handling in the Financial Lines sector with approx. 70% market share in Greece and circa 40% in Cyprus.



ΕΘΝΙΚΗ ΤΡΑΠΕΖΑ

With its 181-year participation in the country's economic and social life, NBG is one of the most significant Greek financial organizations, as it plays a key role in efforts to support the Greek economy and enable the economic transformation of the country. The Group provides a wide range of financial products and services that meet the changing needs of businesses and individuals, including deposit and investment products, various financing facilities, brokerage, insurance, leasing and factoring services. Today Nbg's Group employs a workforce of 8.800 employees. It also has a wide distribution network of 355 branches and 1.433 ATMs in Greece, and provides services through alternative electronic networks (internet, phone and mobile banking), which enable customers to carry out easy, fast and safe everyday transactions. NBG supports Greek businesses by offering new financing tools and high-quality specialized services, placing emphasis on financing productive investments, export trade and new, innovative entrepreneurship.

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Faced with ongoing transformations in the world of energy, Omexom helps its clients to achieve the energy transition. Omexom draws on its expertise in all fields of electricity and gas to build low carbon energy sources and develop the grid, promote optimized energy use and implement innovative and collaborative solutions. Our projects are designed for energy producers, transmission and distribution system operators, local and regional authorities as well as their users in all territories. As an integrator, Omexom continuously looks for the best technological options and deploys the most suitable solutions for its clients' needs in complete autonomy from its suppliers. At Omexom, environment has always been at the heart of our concerns which is even more essential for the coming years. Omexom is upgrading offers by using low-carbon processes and recycled materials that preserve the environment and, at the same time, is launching new low-carbon solutions. We currently form an international network with turnover of €3,8 B, in which the values of Omexom are shared by more than 23,500 employees, in 37 countries via 435 Business Units. Omexom is a VINCI Energies brand.



Fysiko Aerio the Hellenic Energy Company is an integrated energy provider, active in the electricity market too, after its long history as a natural gas provider. With a legacy of more than 160 years and the priceless experience and expertise they imply, the company is continuously upgrading its customer experience, investing in modern technologies. The permanent goal of the company is to provide personalized services, a holistic energy experience as well as additional benefits to its customers, going beyond the standard relationship with energy. Plus, it builds its own ecosystem being active in new areas of sustainability, such as electromobility and smart solutions for domestic and business use. Fysiko Aerio counts more than 600 selling points across Greece and 510,000 households, 18,000 business customers, 1.400 industrial and public sector's customers and is also implementing its geographical expansion plan throughout Greece, remaining always close to its consumers 24/7.

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SPYROPOULOS SA

SPYROPOULOS SA is a commercial - engineering company that offers complete turn key solutions in renewable energy installations including all Development – Engineering – Procurement – Construction Services. The company was founded in 2004 as a construction company and has a portfolio of 35 MW installed PV plants, over 150MW under Development and is currently responsible for the electromechanical maintenance over 150 MW plants as well as for panel cleaning and weed management of over 500MW. SPYROPOULOS SA has developed a unique technical branch network in Greece, operating six branches, one in Kato Achaia which is the headquarters of the company and five more, one in Thebes, one in Ioannina, Kalamata, Xanthi, Larissa, while there is provision for further expansion of the network to other key locations in Greece. The company is also active in the fields of construction, renovations and maintenance of commercial and industrial buildings and also in the field of electro-mechanical installations and maintenance, covering the entire range of works needed to achieve the best result.

17th IAAE European Energy Conference

Athens, September 21 - 24, 2022

The Future of Global Energy Systems

ORGANIZED BY:
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International Association for
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