



ΚΥΠΡΙΑΚΟ
ΕΜΠΟΡΙΚΟ ΚΑΙ
ΒΙΟΜΗΧΑΝΙΚΟ
ΕΠΙΜΕΛΗΤΗΡΙΟ

Λευκωσία, 13 Απριλίου 2016

ΠΡΟΣ: Όλους τους ενδιαφερομένους

ΘΕΜΑ: 5^ο Επιστημονικό Συνέδριο Ανανεώσιμων Πηγών Ενέργειας και Εξοικονόμησης Ενέργειας, 5-6 Μαΐου 2016, Λευκωσία

Κύρια/ε,

Το Κυπριακό Εμπορικό και Βιομηχανικό Επιμελητήριο σε συνεργασία με το Υπουργείο Ενέργειας, Εμπορίου, Βιομηχανίας & Τουρισμού και με όλους τους εμπλεκόμενους σε θέματα ενέργειας φορείς στην Κύπρο και σε συνεργασία με ακαδημαϊκά ιδρύματα της Κύπρου και της Ελλάδας, διοργανώνει για πέμπτη φορά το επιστημονικό συνέδριο **«Renewable Energy Sources & Energy Efficiency, New Challenges» στις 5 και 6 Μαΐου 2016 στο ξενοδοχείο Hilton στη Λευκωσία.**

Το συνέδριο διοργανώνεται για πέμπτη φορά σε συνέχεια των πολύ επιτυχημένων προηγούμενων διοργανώσεων. Σε αυτό θα συζητηθούν και θα παρουσιαστούν εργασίες και τεχνολογίες στον τομέα των Φωτοβολταϊκών, της εξοικονόμησης ενέργειας, των ηλιακών θερμικών τεχνολογιών και άλλων σχετικών τεχνολογιών. Η θεματολογία του συνεδρίου είναι αποτέλεσμα συνεργασίας των επιστημονικών συνεργατών του συνεδρίου γεγονός που εγγυάται την ποιότητα των παρουσιάσεων.

Πέραν των διακεκριμένων ομιλητών που έχουν προσκληθεί στο συνέδριο έχουν αξιολογηθεί και θα παρουσιαστούν πέραν των 50 εργασιών από ακαδημαϊκά ιδρύματα της Κύπρου, της Ελλάδας και άλλων χωρών.

Συνημμένα μπορείτε να βρείτε το προκαταρκτικό πρόγραμμα του συνεδρίου.

Για εγγραφές στο συνέδριο παρακαλώ επισκεφθείτε την ιστοσελίδα www.mse.com.cy/energy ή επικοινωνήστε με τη γραμματεία του Συνεδρίου MSE Congress Plus στο τηλέφωνο 22-466400.

Με εκτίμηση,

Ανδρέας Ανδρέου,
Αναπλ. Διευθυντής Τμήματος Βιομηχανίας,
για Γενικό Γραμματέα.

/ΜΚ.

Preliminary Programme



Under the Auspices of
The Minister of Energy
Commerce Industry and Tourism



5th International Conference on
Renewable Energy Sources
& Energy
Efficiency
- New
Challenges



www.mse.com.cy/energy

5-6 MAY 2016

Hilton Hotel
Nicosia-Cyprus



Organised by:

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Scope of the Conference:

This international conference is organized for the 5th time with great success and it is a very important venue of exchange of experiences, transfer of new knowledge and information. The Conference aims at bringing together all the key stakeholders interested in renewable energy sources, energy efficiency and conventional fuels: industrial experts, academic researchers, policy makers, regulators etc. The thematic areas of the Conference cover all topics of renewables, energy efficiency in all sectors as well as oil and gas technologies.

Who should attend?

- Decision makers, including managers and policy makers, interested in exchanging idea, experiences and learning about new initiatives.
- Representatives of international organizations or other organisations willing to share relevant experience on renewable energy exploitation, energy efficiency techniques and developments of conventional technologies.
- Private companies interested in investing on renewable energy and energy efficiency equipment.
- Individuals who wish to be informed on new developments, tools and techniques.
- Members of the research and academic communities aiming at exchanging results, sharing similar experiences or new applications.
- Regulators, utilities and operators enriching the conference with their views on the changing needs of systems in delivering the quality of supply that everybody expects.

Day 1 Thursday, 5 May 2016

08:30 **Registration**

09:15 **Opening Ceremony**

Welcome address by the Secretary General of the Cyprus Chamber of Commerce and Industry,
Mr Marios Tsiakkis

Conference scope and objectives by the Conference Chairman, **Dr Ioannis Michaelides**

Opening address by HE the Minister of Energy, Commerce, Industry and Tourism, **Mr Yiorgos Lakkotrypīs**

09:45 **Plenary Session I**

Nicholas Wagner (International Renewable Energy Agency),
"IRENA's REMAP 2016 Roadmap for A Renewable Energy Future"

Stephen Walls (U.S. Department of Energy (DOE) Office of Energy Efficiency & Renewable Energy)
"Hawaii Clean Energy Initiative, latest postcard from the future"

Stelios Himonas Director General, Ministry of Energy, Commerce,
Industry and Tourism of the Republic of Cyprus
"Overview of Long-Term Energy Modelling Activities of 2014-16 & Renewable Energy
Roadmap for Cyprus"

11:15 - 11:30 Coffee Break

11:30 *A1: Promoting energy efficiency (Deloitte Session)*
2 hours **Title: Cyprus Energy System – Efficient RES Penetration**

Introduction – Deloitte 5'

Renewable Energy Investment Environment in Cyprus – Challenges & Opportunities:
Presentation by: Nicos S. Kyriakides – Deloitte Limited Partner, Head of Financial Advisory Services - 15'

Balancing the Grid in the isolated RES market of Israel – Pumped Storage Systems
Presentation by: Eitan Parnass, Director General of Green Energy Association of Israel - 15'

UNDP project experience regarding the Sustainable Energy Management in cities and counties
**Presentation by: Prof. Sandro Nizetic (Deputy Minister, Ministry of Construction and Spatial Planning,
Vice Rector of University of Split Croatia) - 15'**

**Outlook of Energy Demand in Cyprus up to 2040 and Implications for National Energy and
Environmental Policy. Presentation by: Theodoros Zachariadis, Cyprus University of Technology - 15'**

Panel discussion (MODERATOR: Deloitte) – 60'

Participants:

1. Mr. Eitan Parnass, Director General of Green Energy Association of Israel
2. Dr. Stelios Himonas or Mr. Constantinos Xihilos, Ministry of Energy, Commerce,
Industry and Tourism
3. Mr. Christodoulos Angastiniotis, Chairman of Cyprus Investment Promotion Agency
4. Dr. Andreas Poullikas, Chairman of Cyprus Energy Regulatory Authority
5. Mr. Christos Christodoulides, Transmission System Operator
6. Prof. Sandro Nizetic (Deputy Minister, Ministry of Construction and Spatial Planning,
Vice Rector of University of Split Croatia)
7. Mr. Dimitri Morozov, Executive Chairman of Green Energy Group
8. Theodoros Zachariadis, Cyprus University of Technology - 15'

13:30 - 14:30 Lunch Break

14:30 *A2: Policy and educational issues*

- 20 min Keynote**
- 1638 Socioeconomic Benefits of Energy Efficiency investments in residential buildings in Greece, The socioeconomic return of the programme "Energy Saving at Home" in Greece, **Danae Diakoulaki**
 - 1612 A Social Cost-Benefit Analysis of Renewable Energy Sources for Power Generation in Cyprus, **Chr. Hadjikyriakou**
 - 1676 MANAGEMENT OF RESOURCES AND BUSINESS CHALLENGES: THE CASE OF CYPRUS, **Doros Aresti**
 - 1678 Domestic energy deprivation in North Greece: The energy poverty-fuel poverty binary, **Natalia Boemi**
 - 1622 QUANTIFYING THE WATER-ENERGY NEXUS IN GREECE, **Isidoros Ziogou**
 - 1677 Energy policies: the gender approach, **Lora Slini**

B2: Energy efficient buildings

- 1643 Towards Nearly Zero Energy Hotels, Technical Analysis and Recommendations, **Theocharis Tsoutsos**
- 1671 Ventilative cooling simulation for optimization and compliance control of nearly zero energy buildings, **Flourentzos Flourentzou**
- 1609 Optimal utilization of Renewable Energy Sources in nearly Zero Energy Buildings – A review, **George Georgiou**
- 1659 U-value: A key role parameter for sustainable buildings, **Efrosyni Giama**
- 1661 Simulation of the Thermal Performance of a Hybrid Solar Assisted Ground Source Heat Pump System in a School Building, **Konstantinos Papakostas**
- 1644 Building trust in Energy Performance Contracting in Southern European countries – the Trust EPC South project, **Theocharis Tsoutsos**

C2: Energy conservation, management and storage

- 1657 Carbon Footprint Analysis as a tool for energy management in small and medium size enterprises, **Agis Papadopoulos**
- 1630 Multi-Agent based Algorithm for Voltage Control of Distributed Energy Resources with Communication Constraints, **Ishtiaq Ahmad**
- 1649 CFD study of thermal comfort in Urban Area, **Dimitri Fidaros**
- 1651 Energy consumption and energy saving measures in poultries, **Dimitris Fidaros**
- 1660 Evaluation of Indoor Conditions in Non-residential Buildings: A case study in Greece, Panagiota Antoniadou
- 1604 Existing situation and how to increase energy efficiency of the street lighting in Cyprus, **Marios Petrakkas**

16:30 - 16:45 Coffee Break

16:45-18:45 *A3: Solar energy*

- 20 min solar Keynote**
- 1621 Characterization and classification of daily sky conditions based on ground measurements of irradiance for improved energy forecasting, **Venizelos Efthymiou**
 - 1641 Characterization and dynamic performance of a small scale four effect distillation unit potentially coupled to a CSP plant, **Marios Georgiou**
 - 1631 Consistent Multiphysics Approach for the Simulation of a Central Tower CSP plant, **Evgeny Votyakov**
 - 1664 Greenhouses: Heating or Cooling?, **Antonios Oikonomopoulos**
 - 1642 The PROTEAS Facility Heliostat Field:Layout and Performance Predictions, **Aris Bonanos**
 - 1625 Technoeconomic analysis of the PROTEAS research infrastructure facility, **Nestor Fylaktos**

B3: RES

- 1666 Yearly Performance of an Enhanced Atmospheric Water Condensator in Producing Water for Agricultural Use, **Polykarpos Polykarpou**
- 1605 Renewable Energy Sources in Crete, **Antiopi Gigantidou**
- 1640 Study of Soil Temperature Variations up to 3 Meters in the Meteorological Station of Aristotle University of Thessaloniki, **George Tsilingiridis**
- 1627 Estimating the socio-economic costs of electricity supply interruptions, **Abhishek Shivakumara**
- 1626 Techno-Economic Analysis of the Potential Conversion of the Outdated Moni Power Plant to a Large Scale Research Facility, **Chrysovalantis Spanias**
- 1627 Cost optimal pathways for the Cypriot energy system, **Constantinos Taliotis**

C3: New challenges

- 1675 Modelling of Energy Production from Alternative Fuels, **George Martinopoulos**
- 1634 Natural gas in Cyprus: the potential case of a mixed blessing, **Constantinos Taliotis**
- 1629 Vehicle natural gas internal combustion engine analysis and comparison with conventional gasoline engine, **Charalambos Chasos**
- 1650 Design and performance of Hybrid Power System, **Dimitris Fidaros**
- 1614 Overview of energy storage technologies and a short-term storage application, **Maria Argyrou**

Day 2 Friday, 6 May 2016

- 9:00 **Gianluca Fulli (TBC)** EC Joint Research Centre Institute for Energy and Transport
"RES-GRID study for Cyprus Electricity System"
- Mark Howells** Professor and head of the division of Energy Systems Analysis, KTH,
The Royal Institute of Technology, Sweden "Energy systems modelling and policy"
- Andreas Poullikkas** Chairman, Cyprus Energy Regulatory Authority (CERA)
"Renewable and Sustainable Energy Futures"

10:30 *A1: Energy Design & Refurbishment Towards Nearly Zero Energy Buildings*

- The Concept of Nearly Zero Energy Buildings, The concept of Zero Energy Buildings, **Despina Serghides**
1606 Thermal assessment of traditional partially subterranean dwellings. The case of Cyprus,
Eleni Malaktou
1608 Architectural Integration of Technological Breakwaters for Wave Energy Generation and for the
Improvement of Marine Corrosion Resistance, **George Charalambous**
1663 ENERGY REFURBISHMENT TOWARDS NEARLY ZERO ENERGY MULTI-FAMILY HOUSES, FOR CYPRUS,
Despina K. Serghides
- 1654 Economic Evaluation of Financial Incentive Schemes for Energy Retrofit Projects in
Residential Buildings, **Nopi Exizidou**
- 1673 Thermal performance of green roofs under Mediterranean climate conditions,
Theodoros Theodosiou

12:00 Coffee Break

12:15-14:00 *A2: Energy Efficient Buildings*

- 1672 The use of Building Information Modelling (BIM) and Life Cycle Assessment (LCA) for the definition
of the environmental performance of buildings, **P.Fokaides**
1602 Parametric Numerical Assessment of the Energy Efficiency of an Innovative Masonry Construction
Component, **Andreas Kyriakidis**
1655 Energy Efficiency in Residential Buildings in Thailand – Opportunities and Prospects, **Nopi Exizidou**
1665 Winter Indoor Thermal Comfort in Low Income Households in Cyprus, **Chryso Chatzinikola**
- 1667 E2VENT: a novel energy efficient system for ventilated façades, **Katerina Tsikaloudaki**

14:30

B1: Solar & PVs

- 1656 Experimental investigation of the water spray cooling technique applied on the photovoltaic panel, **Sandro Nizetic**
1607 Comparative assessment of energy behavioral change of users by using Social Electricity Online Platform tools,
G.Kourtis
1670 Electromagnetic Performance Analysis of a Photovoltaic Device, **Antonios Papadakis**
1620 PV integration and Demand Side Management: First results from Cyprus, **N.Philippou**
1648 Concentrating solar thermal systems: Perspectives for Greece, **Vassiliki Drosou**
1616 Pilot hybrid park utilising solar parabolic collectors and geothermal energy, **Alexandros Pechtelides**

B2: Integrating RES

- 1628 Exploitation of RES Potential for Supporting Electromobility in Small Islands, **J.K. Kaldellis**
1610 Comparative site compliance study of a windfarm using different wind potential measurements,
Konstantinos Gkarakis
1615 A review on solar thermal waste heat energy recovery using thermoelectric generators, **Michael Chrysostomou**
1601 New Challenges in Solar Energy Resource and Forecasting at Different Temporal and Spatial Scales,
Andreas Kazantzidis
1611 Master's Program in Energy: Strategy, Law & Economics at the Department of International & European Studies of the University of Piraeus, **Konstantinos Gkarakis**

C1: EU SOLARIS

- Opening remarks: Session overview (**Nestor Fylaktos**, Cyl)
Concentrated Solar Energy Technologies and subsystems
· Point focusing systems (**Aris Bonanos**, Cyl)
· Parabolic troughs (**Elena Guillen Burrieza**, Cyl)
· Linear Fresnel Collectors (**Alaric Montonen**, Cyl)
· Receivers, storage, steam generation and electricity production (**Costas Marakkos**, Cyl)
· Industrial heat and solar fuels (?,?)

CST technologies by key actors

- Integration and sub-systems of a LFR system in Cyprus (Heaflow Ltd.)
- Optics and the heliostats at the PROTEAS facility (Aris Bonanos, Cyl)
- CRES
- Vision, achievements and results
- Discussion session: ESFRI projects and EU-SOLARIS (joined by DGECPD)

Executive Organising Committee:

Chairman:	Prof Ioannis Michaelides
Co-Chairmen:	Prof Andreas Poulikkas, Dr Venizelos Efthymiou
Conference Coordinator:	Mr Marios Tsiakkis Cyprus Chamber of Commerce and Industry
Members:	
• Mr Andreas Andreou	Cyprus Chamber of Commerce and Industry
• Mr George Partasides	Ministry of Energy Commerce Industry and Tourism, Energy Service
• Mr Christos Maxoulis	Cyprus Scientific and Technical Chamber
• Prof Agis Papadopoulos	Aristotle University of Thessaloniki and Open University of Cyprus
• Dr Nestor Fylaktos	The Cyprus Institute
• Ms Anthi Charalambous	Cyprus Energy Agency
• Mr Panayiotis Keliris	Cyprus Energy Regulatory Authority
• Ms Irene Zavrou	Transmission System Operator, Cyprus
• Mr Andreas Pentaliotis	Natural Gas Public Company of Cyprus
• Dr Constantinos Rouvas	Electricity Authority Cyprus
• Prof Michalis Komodromos	Frederick University

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• Prof Aristides Bonanos	The Cyprus Institute, Cyprus
• Prof Alexandros Charalambides	Cyprus University of Technology, Cyprus
• Prof Stelios Choulis	Cyprus University of Technology, Cyprus
• Prof Chris Christodoulou	Frederick University, Cyprus
• Prof Danae Diakoulaki	National Technical University of Athens, Greece
• Prof Evangelos Dialynas	National Technical University of Athens, Greece
• Dr Vasiliki Drosou	Centre for Renewable Energy Sources, Greece
• Dr Polyvios Eleftheriou	Cyprus University of Technology, Cyprus
• Dr Flourentzos Flourentzou	Estia SA, Switzerland
• Dr Paris Fokaides	Frederick University, Cyprus
• Mr Avraam Georgiou	Cyprus University of Technology
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• Dr Harry Kampezides	National Observatory of Athens, Greece
• Prof George Karagiorgis	Frederick University, Cyprus
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• Prof Manfred Lange	The Cyprus Institute, Cyprus
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• Prof Alexander Mitsos	RWTH Aachen, Germany
• Prof George Papadakis	Agricultural University of Athens, Greece
• Prof John Psarras	National Technical University of Athens, Greece
• Prof Manthos Santamouris	University of Athens, Greece
• Prof Despina Serghides	Cyprus University of Technology, Cyprus

• Prof Dragoslav Sumarac	University of Belgrade, Serbia
• Prof Theodoros Theodosiou	Aristotle University Thessaloniki, Greece
• Prof Antonis Tourlidakis	University of Western Macedonia, Greece
• Prof George Tsilingiridis	Aristotle University Thessaloniki, Greece
• Prof Theocharis Tsoutsos	Technical University of Crete, Greece
• Prof Derek Wilson	Institution of Engineering and Technology, UK
• Prof Theodoros Zachariades	Cyprus University of Technology, Cyprus

Advisory Committee:

• Prof Constantinos Christofides	Rector, University of Cyprus
• Prof George Demosthenous	Rector, Frederick University, Cyprus
• Prof Toulia Onoufriou	President of the Cyprus Hydrocarbons Company
• Prof Costas N. Papanicolas	President, The Cyprus Institute, Cyprus.
• Prof Evangelos Dialynas	National Technical University of Athens, Greece
• Prof Manthos Santamouris	University of Athens, Greece

Invited Keynote Speakers:

RESEE2016

- Plenary Sessions

Plenary session,
Thursday,
5 May 2016

Nicholas Wagner
International Renewable Energy Agency (IRENA)
"IRENA's REMAP 2016 Roadmap for A Renewable Energy Future"

Stephen Walls

U.S. Department of Energy (DOE) Office of Energy Efficiency & Renewable Energy
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"Renewable and Sustainable Energy Futures"

Publication of Selected Papers in Journals

Selected authors of accepted papers will be invited to publish extended and revised versions, after the respective review procedure, in the SCOPUS, EI, INSPEC, etc. listed journals:

- International Journal of Sustainable Energy, Taylor & Francis
- Advances in Building Energy Research, Taylor & Francis
- Journal of Power Technologies, ITC
- Journal of Sustainable Architecture and Civil Engineering, KTU

Conference Fee:

• Non members		
Early Registration before 15th April 2016		€ 290
Registration after 15th April 2016		€ 350
• Members of the Cyprus Chamber of Commerce and Industry and the Technical Chamber of Cyprus		
Early Registration before 15th April 2016		€ 200
Registration after 15th April 2016		€ 250
• University and Research staff		€ 120
• Students		€ 90

Fees cover the admission to all sessions, invitation to all coffee breaks, one lunch, conference material and VAT.

Registration:

To register please visit www.mse.com.cy/energy

Conference Secretariat:

MSE Congress Plus

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Phone: 00357 22 466400, Fax: 00357 22 767680
E-mail: mse@mse.com.cy, Website: www.mse.com.cy
Conference web page: www.mse.com.cy/energy

Conference topics:

Papers are invited reporting original research as well as papers focusing on the results that have been achieved in the areas of Renewable Energy Sources, Energy Efficiency, and oil and gas technologies. Indicative themes of the Conference are listed below:

Renewable Energy Sources and System Integration

Biomass and biofuels
Concentrated solar power
Energy storage technologies
Geothermal technologies
Other renewable energy sources
Photovoltaics
Power systems
Smart grids
Wind energy technologies

Energy Efficiency and Policy

Bioclimatic design of buildings and public spaces
Building management systems
Energy management and conservation
Heating, ventilating and air conditioning systems
Smart cities and communities
Solar cooling and heating
Sustainable transport
Zero energy buildings
Energy policy, economics and planning
Policy monitoring, evaluation, analysis
Microgeneration and cogeneration systems
Efficient lighting technologies

Education and Research in Energy and Environment

Distance learning in Energy and Environmental topics
Interdisciplinary educational programmes
Large scale research facilities
Pilot and demonstration projects
Training and certification schemes
Socioeconomic impacts, international Relations

Challenges for the Region

Carbon capture and storage technologies
Enhanced oil recovery for deepwater
Hydrocarbons exploration strategies
Natural gas liquefaction technologies
Natural gas pipeline transportation technologies
Natural gas policy issues
Oil and gas reserves and economics by region
Shale gas technologies

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