



  
**DISTRES CONFERENCE**



**Conference on the promotion of  
Distributed Renewable Energy Sources  
in the Mediterranean region**

**December 11<sup>th</sup> - 12<sup>th</sup>, 2009**

**Nicosia, Cyprus**

**Venue: Cyprus Hilton hotel, Nicosia**



## 1. Introduction

The European Union's (EU) main long-term goal in the field of energy is the conversion of the existing EU energy system, which is heavily dependent on fossil fuels, to a sustainable energy system based on differentiated energy sources of higher energy efficiency. This will enable the EU to face the challenges posed by the security of the energy supply and the climate change while, at the same time, increasing the competitiveness of the European energy industries.

Recent concerns on environmental protection and sustainable development resulted in the critical need for a cleaner energy technology. This is leading to the use of renewable energy sources (RES) and to an alternative to large scale source of energy production, known as distributed generation (DG) technologies.

Solar potential is an abundant commodity in the Mediterranean region and, therefore, RES-DG technologies for electricity production from solar energy (photovoltaic and/or solar thermal concentrating systems) are attractive. Nevertheless, such systems are not deemed commercially viable, neither profitable, unless strong subsidies are available within the Mediterranean countries. An immediate conclusion from concerted European research, however, is that solar thermal systems and PV systems are reliable and technically feasible for installation and operation in the Mediterranean region. It still remains, though, to develop strong financial incentives that RES-DG becomes viable on technical and economic terms. Persistent obstacles are the technology cost, the stability issue for isolated power systems and the Mediterranean countries energy policies.

A European Commission project, namely DISTRES ([www.distres.eu](http://www.distres.eu)), funded under the Framework Program Six International Corporation (INCO) aims (a) to promote the electricity generation from solar energy, photovoltaic (PV) systems and solar thermal systems, paving the way for pilot systems and products, (b) to produce capacity building methodologies and (c) to disseminate the results as widely as possible in the Mediterranean countries and in the EU. The results from DISTRES will pave the way for pilot systems and products, meeting different needs and climate conditions under the specific socio-economic conditions of Mediterranean countries and will contribute to the development of appropriate RES-DG policies.

## 2. Aim

The aim of the conference is twofold:

- To present the research and development effort undertaken by the various academic and research establishments for the future penetration of solar thermal and PV systems in the power electricity generation industry in European and Mediterranean countries
- To highlight the importance of research and development for the future of the electricity sector in Mediterranean region

### **3. Presenters and participants**

The Conference will be open to academic and/or electricity related researchers to present their work in the fields indicated in section 4 below. Interested parties for attending the Conference might be end-users, regulators, manufacturers, investors, researchers and utilities from European and Mediterranean countries.

### **4. Conference subject areas**

- CO<sub>2</sub> emission allowances and trading
- Deregulation and renewable energy sources integration in European and Mediterranean electricity systems
- Distributed generation
- Electricity storage systems
- Environment and climate change
- Green hydrogen production, storage and use
- Implications of renewable energy sources penetration in electricity networks
- Kyoto CDM and JI projects in European and Mediterranean countries
- Power system economics
- PV and solar thermal technology markets, financing schemes, business models and market entry strategies in European and Mediterranean countries
- PV systems
- Renewable energy sources technologies
- Renewable energy sources: capacities, targets, environmental issues and policies in European and Mediterranean countries
- Renewable generation scheduling
- Socio-environmental aspects of electricity generation from renewable energy sources
- Solar thermal systems for power generation

## 5. Conference committees

### CHAIRS:

- Dr. Andreas Poullikkas, Electricity Authority of Cyprus, Cyprus
- Mr. Michele Genovese, European Commission
- Dr. Venizelos Efthimiou, Electricity Authority of Cyprus and Chairman of CIGRE National Committee of Cyprus
- Mr. Nicos Kouyialis, Electricity Authority of Cyprus and Chairman of IET Cyprus Network

### CO-CHAIRS:

- Dr. Charalambos Malamatenios, Center of Renewable Energy Sources, Greece
- Prof. Dr. Rolf Wüstenhagen, University of St. Gallen, Switzerland
- Mr. Tony Matar, ALMEE, Lebanon
- Mr. Athanase Vafeas, Technofi, France

### SECRETARY:

- Mr. Ioannis Hadjipschalis, Electricity Authority of Cyprus, Cyprus

### LOCAL ORGANIZING COMMITTEE:

- Mr. Ioannis Hadjipschalis, Electricity Authority of Cyprus, Cyprus
- Mr. George Kourtis, Electricity Authority of Cyprus, Cyprus

### SCIENTIFIC COMMITTEE:

- Bouzeriba Mohamed (Algeria)
- Chenak Abdelkrim (Algeria)
- Christodoulou Christodoulos (Cyprus)
- Delenta Maria-Eleni (Cyprus)
- Demokritou Philip (Cyprus)
- Dialynas Evangelos (Greece)
- Efthimiou Venizelos (Cyprus)
- Georghiou George (Cyprus)
- Haddouche Amal (Morocco)
- Hadjipaschalis Ioannis (Cyprus)
- Hamed Husein (Palestine)
- Hatziargyriou Nicos (Greece)
- Hockerts Kai (Denmark)
- Karageorgis George (Cyprus)
- Kyriakides Elias (Cyprus)
- Kourtis George (Cyprus)
- Kouyialis Nicos (Cyprus)
- Malamatenios Charalambos (Greece)
- Matar Tony (Lebanon)
- Menicou Michalis (Cyprus)
- Petersen Kaj Leonhart (Denmark)
- Poullikkas Andreas (Cyprus)
- Quadrado José Carlos (Portugal)
- Rashed Bothayna (Egypt)
- Vafeas Athanase (France)
- Wustenhagen Rolf (Switzerland)

## 6. Keynote speakers

- ~ Mr. Michele Genovese, European Commission, *International Scientific Cooperation in FP7*
- ~ Dr. Michael Geyer, Director International Business Development, Abengoa, Spain, *Spanish experience with the first commercial solar power tower in the world and future solar thermal power perspectives*
- ~ Mr. Frank Niendorf, Director International Market Development, Solar Millennium, Germany, *A success story of the first parabolic trough power plants in Europe: ANDASOL*
- ~ Mr. Rudiger Wolf, Senior Advisor, Solar Power Group, Germany, *Fresnel technology*
- ~ Mr. Solon Kassinis, Director of Energy Department, Ministry of Commerce, Industry and Tourism, Cyprus, *Steps in investing and promoting the establishment of a CSP plant in Cyprus*
- ~ Prof. Costas Papanicolas, President, Cyprus Institute, Cyprus, *Co-generation of electricity and water using CSP technologies*
- ~ Prof. Alexandros Mitsos, Massachusetts Institute of Technology, USA, *Optimal use of solar thermal energy for combined power generation and water desalination*
- ~ Dr. Venizelos Efthimiou, Network Development Projects Manager, Electricity Authority of Cyprus, Cyprus, *Deployment of a smartgrid*
- ~ Dr. Andreas Poullikkas, Research and Development Assistant Manager, Electricity Authority of Cyprus, Cyprus, *Future sustainable energy systems*

## 7. Conference websites

[www.distres.eu](http://www.distres.eu)

[www.cyprusconferences.org/distres](http://www.cyprusconferences.org/distres)

## 8. Contact Information

Dr Andreas Poullikkas  
Electricity Authority of Cyprus  
P.O Box 24506, 1399 Nicosia  
Cyprus  
Email: [apoullik@eac.com.cy](mailto:apoullik@eac.com.cy)

## 9. Location

The DISTRES Conference will take place in Nicosia, Cyprus on Friday the 11<sup>th</sup> of December 2009. Cyprus is the third largest island in Mediterranean, with a past history of 10,000 years. Cyprus is a modern country that effortlessly marries European culture with ancient enchantment. One of the benefits of being a

Mediterranean island is plentiful sunshine throughout the year, and Cyprus is no exception. In fact, Cyprus epitomizes the ideal weather of the region with sunny days and fine temperatures almost every day. Extremes of temperatures are rare, meaning Cyprus has something to offer every month of the year, whether it's swimming (as late as November) or enjoying cultural sites and festivals (all year long). The weather in Nicosia in December is mildly cold with average daily temperature around 13°C, and with an average of 3 rainy days for the month.

## **10. Official language**

The official language of the Conference will be English. All papers are written in English and the Proceedings are published in English. The presentations will also be given in English.

## **11. Proceedings**

Each registered participant will receive a CD containing the full papers being presented at the Conference.

## **12. Registrations**

- Early registration (up to 30 Oct 2009): €220
- Late registration (after 31 Oct 2009): €250  
(including Conference proceedings, Coffee breaks, 2 lunches and 1 dinner)
- Student early registration (up to 30 Oct 2009): €120
- Student late registration (after 31 Oct 2009): €150  
(including Conference Proceedings and coffee breaks)

Conference registration available only online at: <http://cyprusconferences.org/distres/> after 1<sup>st</sup> June 2009.

## 13. Preliminary program

Day 1 – 11 December 2009	
08:00	<b>Registration</b>
	<b>Opening Ceremony</b>
09:00	<b>Welcome notes</b> <i>Chairperson:</i>
	H.E. Mr. Antonis Paschalides, Minister of Commerce, Industry and Tourism  H.E. Mr. Nicos Nicolaides, Minister of Communications and Works  Mrs. Androula Kaminara, Head of the EU Representation in Cyprus  Mr. Costas Ioannou, Chairman of Cyprus Energy Regulatory Authority  Mr. Harris Thrasou, Chairman of Board of Directors, Electricity Authority of Cyprus  Mr. Andreas Theophanous, Director of Cyprus Transmission System Operator  Dr. Venizelos Efthimiou, Chairman of CIGRE Cyprus National Committee  Mr. Nicos Kouyialis, Chairman of IET Cyprus
09:35	<b>Conference scope and objectives</b> <i>Conference Chairman: Dr. Andreas Poullikkas</i>
09:40	<b>Break</b>

## Preliminary program (continued)

Day 1 – 11 December 2009	
09:45	<b>Plenary technical session</b>
	<b>Solar thermal power technologies for the Mediterranean region</b> <i>Chairperson:</i>
09:45	Moving away from sole dependence of fossil fuel-Spanish experience with the first commercial solar power tower in the world and future solar thermal power perspectives (invited speech) <i>M. Geyer, Abengoa, Spain</i>
10:05	A success story of the first parabolic trough power plants in Europe: ANDASOL (invited speech) <i>F. Niendorf, Solar Millennium, Germany</i>
10:25	Steps in investing and promoting the establishment of a CSP plant in Cyprus (invited speech) <i>S. Kassinis, Ministry of Commerce, Industry and Tourism, Cyprus</i>
10:45	Co-generation of electricity and water using CSP technologies (invited speech) <i>C. Papanicolas, Cyprus Institute, Cyprus</i>
11:05	<b>Coffee</b>
11:35	<b>Plenary technical session</b>
	<b>Solar thermal power technologies for the Mediterranean region</b> <i>Chairperson:</i>
11:35	Fresnel technology (invited speech) <i>R. Wolf, Solar Power Group, Germany</i>
11:55	Optimal use of solar thermal energy for combined power generation and water desalination (invited speech) <i>A. Mitsos, Massachusetts Institute of Technology, USA</i>
12:15	Comparison study for CSP projects in southern Mediterranean countries (Algeria – Egypt – Morocco) (Paper No. 143) <i>A. Fayek, New &amp; Renewable Energy Authority, Egypt</i>
12:35	Floating solar chimney technology for EU and Mediterranean countries (Paper No. 102) <i>Ch. Papageorgiou, National Technical University Athens, Greece</i>
12:55	<b>Lunch</b>

## Preliminary program (continued)

Day 1 – 11 December 2009		
14:30	Technical sessions	
	<b>Solar thermal technologies</b> <i>Chairperson:</i>	<b>Smartgrids</b> <i>Chairperson:</i>
14:30	Modelling and numerical simulation of ISCC system in Algeria (Paper No. 146) <i>S. Bouaichaoui, Centre of Development of Renewable Energies, Algeria</i>	Packaging R&D results for dissemination in the multi-actor, multi-technology field of distributed energy resources (Paper No. 162) <i>A. Vafeas, Technofi, France</i>
14:45	Assessment of power generation using parabolic trough solar thermal technology in Cyprus (Paper No. 160) <i>I. Hadjipaschalis, Electricity Authority of Cyprus, Cyprus</i>	Environmental benefits from DG operation when network losses are taken into account (Paper No. 163) <i>A. Anastasiadis, National Technical University of Athens (NTUA), Greece</i>
15:00	A profile of concentrating solar thermal power plant for distributed generation (Paper No. 136) <i>D. Popov, Technical University of Sofia, Bulgaria</i>	Application of DFACTS for the improvement of penetration capacity of distributed generation (Paper No. 172) <i>D. Watts, Pontificia Universidad Catolica de Chile, Chile</i>
15:15	Potential of solar dish stirling system application for electricity generation in Algerian south (Paper No. 110) <i>M. Abbas, Solar Equipments Development unit, Algeria</i>	Optimal design of decentralised power supply systems with high share of stochastic fluctuating renewable energies (Paper No. 157) <i>C. Sourkounis, Ruhr University Bochum, Germany</i>
15:30	Parabolic trough solar power systems with thermal energy storage: A feasibility study (Paper No. 177) <i>S. Kalogirou, Cyprus University of Technology, Cyprus</i>	Decision support systems for investors on Electricity: A scenario-creative model for the design of a power plant based on renewable energy sources (Paper No. 114) <i>F. Coutelieris, University of Ioannina, Greece</i>
15:45	Solar/thermal power plants: Thermodynamics, efficiency, technical and economical feasibility of combined thermal and solar power systems at Mediterranean areas (Paper No. 115) <i>Ch. Chasos, Frederick University, Cyprus</i>	Practical implementation of grid connected energy storage systems with lithium-ion battery: the GROW-DERS project (Paper No. 153) <i>J. Cousseau, SAFT, France</i>
16:00	Solar thermal repowering of fossil fuel fired power plant as an option for faster RES penetration (Paper No. 137) <i>D. Popov, Technical University of Sofia, Bulgaria</i>	Large scale integration of electric vehicles in decentralised power supply systems (Paper No 158) <i>C. Sourkounis, Ruhr University Bochum, Germany</i>

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18:15	<b>End of Day 1</b>																
20:00	<b>Conference Gala Dinner</b>																

## Preliminary program (continued)

Day 2 – 12 December 2009																	
08:00	<b>Registration</b>																
08:45	<b>Conference announcements</b>																
09:00	<b>Keynote lecture</b> <i>Chairperson:</i> <p style="text-align: center;"><b>Deployment of a smartgrid</b></p> <i>Dr. Venizelos Efthimiou, Chairman of CIGRE, Cyprus</i>																
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**Day 2 – 12 December 2009**

13:30	<b>Lunch</b>	
15:00	<p><b>Keynote lecture</b>  <i>Chairperson:</i></p> <p align="center"><b>Future sustainable energy systems</b></p> <p><i>Dr. Andreas Poullikkas, Electricity Authority of Cyprus, Cyprus</i></p>	
15:30	<b>Technical sessions</b>	
	<p><b>Photovoltaic systems</b>  <i>Chairperson:</i></p>	<p><b>Climate change</b>  <i>Chairperson:</i></p>
15:30	<p>Market entry Photovoltaic: Assessment of technical and economic potential and the selection of priority sites in Bulgaria (Paper No. 116)  <i>K. Schmitt, Lahmeyer International, Germany</i></p>	<p>Climate change impacts on the energy sector and possible adaptation options (Paper No. 156)  <i>M. Lange, Cyprus Institute, Cyprus</i></p>
15:45	<p>Economic evaluation of low PV penetration in island power systems, application to Cyprus (Paper No. 108)  <i>A. Tsikalakis, National Technical University of Athens (NTUA), Greece</i></p>	<p>CO<sub>2</sub> Emission reductions – Abate, trade or develop (Paper No. 148)  <i>P. Conlon, ESB International, Republic of Ireland</i></p>
16:00	<p>Structural and optical study of TiO<sub>2</sub> thin films prepared by sol-gel spin-coating (Paper No. 130)  <i>A. Ihlal, Universite Ibn Zohr, Morocco</i></p>	<p>The risk of respiratory symptoms near power stations among 15-17 year old students in Cyprus (Paper No. 138)  <i>P. Yiallouros, Cyprus Institute, Cyprus</i></p>
16:15	<p>Feasibility analysis for the installation of photovoltaic parks in Cyprus (Paper No. 161)  <i>G. Kourtis, Electricity Authority of Cyprus, Cyprus</i></p>	<p>Gas co-generation in Serbia – Impacts on environment and power distribution system (Paper No. 117)  <i>V. Shiljkut, Electricity Distribution Company Belgrade, Serbia</i></p>
16:30	<p>Power loss calculations in large solar parks (Paper No. 176)  <i>K. Papastergiou, ABB Corporate Research Centre, Sweden</i></p>	<p>Use of chitosan in coagulation flocculation of raw water of Keddara and Beni Amrane dams (Paper No. 113)  <i>H. Zemmouri, Centre of Development of Renewable energies, Algeria</i></p>
16:45	<p>Low cost thin films for photovoltaic applications (Paper No. 129)  <i>A. Ihlal, Universite Ibn Zohr, Morocco</i></p>	<p>Climate policy instruments in Balcan EU countries: Current state and prospects (Paper No. 179)  <i>O. Pechac, National and Kapodistrian University of Athens, Greece</i></p>
17:00	<b>Conference conclusions</b>	
17:30	<b>End of Conference</b>	

## 14. DISTRES consortium

### Contact

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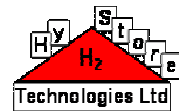


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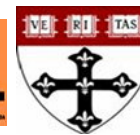
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**DISTRES**  
consortium

DISTRES project addresses the objectives of European Commission International Cooperation on *Renewable Energies for Mediterranean specific needs*. DISTRES focuses wholly under the key area *Renewable energy electricity produced from solar energy (photovoltaic and/or solar thermal concentrating system)* and is financially supported by the European Commission through the 6th Framework Programme for Research and Development.

DISTRES has been running since January 1<sup>st</sup> 2007 and is expected to end on the 31<sup>st</sup> December 2009.



## 15. Conference sponsors



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