



November 2 - 5 2008

Thessaloniki

Greece

Med Power 2008

Conference Programme

**6th Mediterranean
Conference and
Exhibition on Power
Generation,
Transmission,
Distribution and
Energy Conversion**



Hotel Makedonia Palace

TECHNICAL PROGRAMME

Monday, November 3, 2008

PLENARY OPENING SESSION

Monday, November 3, 09.00 – 10.00

Chairpersons: N. HATZIARGYRIOU, A. KOKKOSIS, N. KOUYIALIS, A. BRAUNSTEIN

Introduction by Prof. EVANGELOS DIALYNAS, Conference Co-Chairman

Addresses by:

- Aristotle University of Thessaloniki, Prof. S. PANAS, Vice Rector
- IET Hellas, Prof. A. KOKKOSIS, Hon. Secretary
- IET Cyprus, N. KOUYIALIS, Chairman
- IET Israel, Prof. A. BRAUNSTEIN, Chairman
- Technical Chamber of Greece, C. SPIRTZIS, Vice President
- Technological Educational Institute (TEI) of Piraeus, Prof. L. VRIZIDIS, President
- Hellenic Transmission System Operator, Dr. E. LEKATSAS, Chairman of the Board of Directors
- Electricity Authority of Cyprus, Dr. V. EFTHIMIOU, on behalf of General Manager
- Public Power Corporation S.A., Prof. N. HATZIARGYRIOU, Vice President

Opening by:

- Deputy Minister of Development, Hellas, Mr. S. KALAFATIS

PLENARY PANEL SESSION

Monday, November 3, 10.00 – 11.10

ELECTRIC POWER SYSTEM OPERATION IN CYPRUS AND GREECE

Chairpersons: A. THEOPHANOUS, N. KOUYIALIS

- 10.00 – 10.20** G. Ashikalis, Operations and Personnel Manager Transmission System Operator of Cyprus, **“Trading and Settlement Rules of the Cyprus Electricity Market”**
- 10.20 – 10.40** A. Poullikkas, Research and Development Assistant Manager Electricity Authority of Cyprus, **“Towards the Future Sustainable Electric Utilities”**
- 10.40 – 11.00** E. Lekatsas, Chairman of the Board Directors of Hellenic Transmission System Operator, **“Electricity Market Liberalisation Model in Greece”**

PLENARY PANEL SESSION

Monday, November 3, 11.20 – 13.20

ELECTRICITY BUSINESS IN SOUTH – EASTERN EUROPE

Chairperson: N. HATZIARGYRIOU

- 11.20 – 11.40** N. Hatziargyriou, Vice President of Public Power Corporation S.A. (PPC), **“Business Development Activities and Partnerships of PPC”**
- 11.40 – 12.00** G. Georgantzis, Director of Transmission System Department of PPC, **“Existing Interconnections Between Greek Mainland and Neighbouring Countries”**

- 12.00 – 12.20** A. Georgopoulos, Director of Transmission New Projects Department of PPC,
“Future Plans for Network Interconnections Between Greece and Neighbouring Countries”
- 12.20 – 12.40** M. Champakis, Deputy Director of Department of Energy Management of PPC,
“A Consideration on Energy Trading in South East Europe”
- 12.40 – 13.00** D. Papakonstantinou, Director of Strategy Department of PPC,
“PPC’s Expansion Strategy in South East Europe”
- 13.00 – 13.20** T. Garis, CEO of PPC Renewables,
“PPC Renewables Activities and Prospects”

PLENARY PANEL SESSION

Monday, November 3, 14.20 – 15.40

INDEPENDENT POWER PRODUCERS AND TRADING IN THE GREEK ELECTRICITY MARKET

Chairperson: A. BAKIRTZIS

- 14.20 – 14.40:** A. Tzouros, Managing Director Thessaloniki Power S.A.,
“Drivers for Development in the Greek Energy Sector”
- 14.40 – 15.00:** K. Michalakis, Managing Director Iron Thermolectric S.A.,
“Peak Load Units in Greece – Market Policies and Controversies”
- 15.00 – 15.20:** I. Desypris, Chief Regulation, Institutional Relations and Communication Officer Endesa Hellas S.A.,
“Endesa Hellas – A Dynamic Player in the Greek Electricity Market”
- 15.20 – 15.40:** E. Karydogiannis, Managing Director EGL Hellas S.A.,
“Market Issues in Greece and Balkan Countries”

PLENARY PANEL SESSION

Monday, November 3, 15.50 – 18.00

RENEWABLE ENERGY GENERATION IN THE GREEK ELECTRICITY MARKET

Chairperson: E. DIALYNAS

- 15.50 – 16.10:** Y. Tsiknakou, Director of Hydroelectric Works Terna Energiaki,
“Hydroelectric Projects in the Greek Electricity Market: Development and Perspectives”
- 16.10 – 16.30:** A. Tsantilas, Energy General Director Rokas Renewables,
“Rokas Renewables – Main Greek RES Driver”
- 16.30 – 16.50:** P. Ladakakos, Managing Director ENTEKA S.A.
“Technical Challenges for Large Scale Wind Power Penetration in Greece”
- 16.50 – 17.10:** S. Garyfalakis, Managing Director Enercon Hellas S.A.
“ENERCON Wind Field Experience in Greek Market Since 1995”
- 17.10 – 17.30:** A. Zachariou, Commercial Director Solar Cells Hellas S.A.,
“PV Industry and Market in Greece”
- 17.30 – 17.50:** D. Schmitt, Managing Director Conergy EPE,
“The Greek PV Market and Critical Choices – Conergy’s Position”

PAPER SESSIONS

Tuesday, November 4, 2008

KEY NOTE SPEECH

Tuesday, November 4, 09.00 – 09.40

Chairpersons: N. HATZIARGYRIOU, S. KAVATZA

J. Milanovic, The University of Manchester (UK), “**Quality of Electricity Supply in the Market Drives Environment – Future Challenges**”

SESSION T1: MARKET MODELS AND APPLICATIONS

Tuesday, November 4, 09.45 – 11.30

Chairpersons: M. MATOS, A. GEORGOPOULOS

MED08/171 “Transmission Modelling and Risk Analysis in Congestion Revenue Rights Markets”, A. Papalexopoulos, M.R. Bjelogric (USA)

MED08/051 “Modelling Long-term Uncertainties in Generation Investment Projects in Competitive Electricity Markets”, A.J.C. Pereira, J.T. Saraiva (Portugal)

MED08/073 “Hydrothermal Self-Scheduling in Day-Ahead Energy and Reserves Markets”, C.K. Simoglou, A.G. Bakirtzis (Greece)

MED08/129 “Theoretical Evaluation of a Generic Virtual Power Plant Framework Using Service Oriented Principles”, M. Decker, B. Poulsen, P. Andersen, J. Ostergaard, C. Traeholt (Denmark)

MED08/067 “Energy and Reserve Interaction in the Greece’s Electricity Market”, P. Andrianesis, G. Liberopoulos, G. Kozanidis (Greece)

MED08/046 “Assessment of Future Sustainable Natural Gas Combined Cycle Technologies”, A. Poullikkas, I. Hadjipaschalis (Cyprus)

SESSION T2: POWER QUALITY

Tuesday, November 4, 09.45 – 11.30

Chairpersons: J. MILANOVIC, D. LABRIDIS

MED08/070 “Facts for Power Quality Improvement in Railway Electrification”, R. Grünbaum (Sweden), C. Papadopoulos (Greece)

MED08/141 “Evaluation of Empirical Mode Decomposition for Power Quality Disturbance Classification”, V. Agarwal, L.H. Tsoukalas (USA)

MED08/155 “Voltage Sag Cost Assessment Based On Fault Position Method and Generalised Sag Table”, Y. Zhang, J.V. Milanovic (UK)

MED08/115 “Power Quality Monitoring and Analysis in a Paper Mill Plant”, M. Rangoussi, K. Prekas, S. Vassiliadis, G. Prekas (Greece)

MED08/062 “Harmonic Distortion from Constant Frequency AC Controller Used in Power Saving Applications Under Normal and Faulty Conditions”, G.C. Ioannidis, C.S. Psomopoulos, T.T. Matopoulos (Greece)

MED08/227 "The Impact of Disturbances on the Voltage Dips in the Electrical Power Networks with Different Voltage Levels", A. Jahic, T. Konjic (Bosnia and Herzegovina), J. Pihler, J. Vorsic (Slovenia)

SESSION T3: OPERATIONAL PLANNING - I

Tuesday, November 4, 09.45 – 11.30

Chairpersons: A. THEOPHANOUS, C. ELEFTHERATOS

MED08/191 "Large Disturbances in the UCTE Interconnection - Lessons Learned and Proposed Measures", J. Kabouris, A. Neris (Greece)

MED08/061 "Multi-Area Power System State Estimation", G.N. Korres (Greece)

MED08/131 "Short-Term Load Forecasting for Customers in the Framework of Greek Electricity Market", E.N. Dialynas, G. Sideratos, G. Georgantzis, K. Tsirolis, P. Moraitis (Greece)

MED08/146 "Primal-Dual Nonlinear Rescaling Method for Optimal Power Flow", H. Zhao, X. Fan, J. Guo (China)

MED08/205 "Flexible Load Interruptions in a Virtual Power Plant", E. Rikos, T. Tomtsi, S. Tselepis, N.D. Hatziaargyriou (Greece), P. Koponen (Finland)

MED08/142 "Hybrid Modeling of Hydro Generator Power Control", G. Ruzhekov, T. Puleva (Bulgaria)

MED08/238 "Optimal Operation of Hydro-dominated Multireservoir Systems in Deregulated Electricity Markets", N.A. Iliadis (Greece), M.V.F. Pereira (Brasil)

SESSION T4: APPLICATIONS OF WIND GENERATION – I

Tuesday, November 4, 09.45 – 11.30

Chairpersons: P. DOKOPOULOS, R. CIRIC

MED08/080 "Wind Turbine Cut Outs in a Power System Region", N.A. Cutululis, P. Sorensen, X.G. Larsen (Denmark)

MED08/138 "Maximum Wind Energy Contribution in Autonomous Island Electrical Networks Using Probabilistic Analysis", D. Tiligadas, K.A. Kavadias, J.K. Kaldellis (Greece)

MED08/160 "Crete Wind Farms Experience", A. Gigantidou (Greece)

MED08/149 "Grid Code Requirements for Wind Power Interconnection into Power Systems", B. Singh, S.N. Singh (India), D.P. Papadopoulos, P.A. Katsigiannis (Greece)

MED08/137 "Optimum Energy Storage Sizing for the Application of a Wind-CAES Configuration in Autonomous Island Networks", D. Zafirakis, K.A. Kavadias, J.K. Kaldellis (Greece)

MED08/057 "Effect of Wind Generation on Steady-State Voltage Stability", R. Stanev (Bulgaria)

SESSION T5: APPLICATIONS OF WIND GENERATION - II

Tuesday, November 4, 12.00 – 14.00

Chairpersons: M. PAPADOPOULOS, C. SOURKOUNIS

MED08/166 "Methodology for Robust Assessment of the Financial Viability of Wind Energy Projects", J. Mutale, J.V. Milanovic, Y. Zhang (UK)

MED08/236 "Numerical Weather Prediction in Wind Energy Forecasting: New Techniques", G. Kallos, G. Galanis, A. Fragoulis (Greece)

- MED08/196 "Model and Simulation Results of a DC/DC Boost Converter in a W/T Equipped With Synchronous Generator", I. Margaris, A. Tsouchnikas, N.D. Hatziargyriou (Greece)
- MED08/140 "An Integrated System for Grid-Connected Variable-Speed Wind Power Applications", C. Patsios, A. Chaniotis, A. Kladas (Greece)
- MED08/163 "Investigating the Relation Between the Reliability and the Technical Availability of Wind Energy Applications", E. Kalafatis, P. Skittides, J.K. Kaldellis (Greece)
- MED08/090 "Wind Turbine Control Strategy Enabling Mechanical Stress Reduction Based on Dynamic Model Including Blade Oscillation Effects", C. Pournaras, V. Riziotis, A. Kladas (Greece)

SESSION T6: SYSTEM SECURITY ASSESSMENT

Tuesday, November 4, 12.00 – 14.00

Chairpersons: C. VOURNAS, M. KEZUNOVIC

- MED08/220 "Improving Emergency Reserve in Isolated Power Systems by Using the Short Time Overloading Capability of Generating Units", E. Thalassinakis, E.N. Dialynas, G. Stavrakakis (Greece)
- MED08/190 "Simplified Wind Farms Models for Short Circuit Level Calculations", F. Kanellos, J. Kabouris (Greece)
- MED08/065 "A New Cell Method to Monitor Power System Dynamics", Y.V. Makarov, J. Ma, N. Zhou, C. Miller, T.B. Nguyen (USA), E. De Tuglie (Italy)
- MED08/185 "Comparison of Gas Turbine and Combined Cycle Models for System Stability Studies", J.C. Mantzaris, M.E. Karystianos, C.D. Vournas (Greece)
- MED08/210 "A Reinforcement Learning Approach for the Determination of Spinning Reserve in an Isolated Power System", E.M. Voumvoulakis, N.D. Hatziargyriou (Greece)
- MED08/055 "Effect of Power System Stabilizer and Static Var Compensation on Dynamic Stability of Power System", V. Komoni, G. Kabashi (Kosovo), L. Gjini (Albania)
- MED08/178 "Optimal Operation of Dynamic VAr Sources for Mitigation of Delayed Voltage Recovery", G.K. Stefopoulos, G.J. Cokkinides, A.P. Meliopoulos (USA)

SESSION T7: TRANSFORMERS - DRIVES

Tuesday, November 4, 12.00 – 14.00

Chairpersons: V. KATIC, A. KLADAS

- MED08/193 "Measurements and Computation of Surge Transferred Overvoltages in Distribution Transformers", M. Popov, L. Van der Sluis, R.P.P. Smeets (Netherlands)
- MED08/114 "Development of Economical Analysis and Technical Solutions for Efficient Distribution Transformers", A.F. Picanco, C. de Salles, M.L.B. Martinez, P.C. Rosa, H.R.P.M. de Oliveira (Brazil)
- MED08/101 "A New Technique for Reducing the Total Owing Cost of Wound Core Distribution Transformers", T.D. Kefalas, A.G. Kladas (Greece)
- MED08/066 "Electromagnetic Transients of Special Transformers - Coupled FEM and GA Approach", S. Cundeva, M. Cundeva-Blajer, L. Arsov (FYROM)
- MED08/045 "Moisture Detection of Oil in Power Transformers Using Ultrasonic Techniques", C. Diamianou (Cyprus)

MED08/092 "A Fine-Tuning Regulator for High Performance Control of Switched Reluctance Motor Drives", I. Kioskeridis, C. Mademlis (Greece)

SESSION T8: APPLICATIONS OF PHOTOVOLTAIC SYSTEMS

Tuesday, November 4, 12.00 – 14.00

Chairpersons: G. GOLAN, M. RANGOUSI

MED08/174 "Low Cost Silicon Solar Cells Using Metallic Oxide Films", G. Golan, A. Axelevitch (Israel)

MED08/107 "Power Quality Response of Distribution Grids with Connected Photovoltaic Systems under Different Solar Irradiation Conditions and Various Concentration Scenarios", M. Patsalides, G. Makrides, G.E. Georghiou, A. Stavrou, V. Efthimiou (Cyprus)

MED08/102 "Harmonic Modeling and Simulation of Small Photovoltaic Systems Connected to the LV Distribution Network", I.T. Papaioannou, A.S. Bouhouras, A.G. Marinopoulos, M.C. Alexiadis, C.S. Demoulias, D.P. Labridis (Greece)

MED08/103 "Reliability Improvement in the Greek Power System Resulting by Installation of Photovoltaic Systems", A.S. Bouhouras, A.G. Marinopoulos, I.T. Papaioannou, D.P. Labridis, P.S. Dokopoulos (Greece)

MED08/097 "The Effect of Surface Temperature Distribution in PV Cells on the Overall Power Generation", P. Wolf, V. Benda, Z. Machacek (Czech Republic)

KEY NOTE SPEECH

Tuesday, November 4, 15.00 – 15.40

Chairperson: A. KOKKOSIS

John Scott, IET (UK), "Electricity Networks: Outstanding Opportunities and Reluctant Revolutionaries"

SESSION T9: MARKET ISSUES

Tuesday, November 4, 15.45 – 17.45

Chairpersons: A. PAPALEXOPOULOS, M. CHAMPAKIS

MED08/203 "Building and Using Load Profiles in Energy Market Operation", M.A. Matos, J.N. Fidalgo, L.F. Ribeiro (Portugal)

MED08/047 "SEE Coordinated Auction Office: A Step Forward Liberalization and Transparency the European Electricity Market", N. Athanasiadis, A. Tassoulis, D. Fourlaris (Greece)

MED08/118 "Co-Optimization of Commodities in the Greek Energy Markets", P.N. Biskas, C.E. Zoumas, M. Philippou (Greece)

MED08/197 "The New HTSO Market Management System", P.N. Biskas, D. Michos, P. Nikolaou, M. Philippou, I. Blanas (Greece)

MED08/112 "Activities of an Electric Utility in the New Environment", A. Kellas (Cyprus)

MED08/209 "A Consideration on Energy Trading in South-Eastern Europe", A. Begleri, M. Champakis (Greece)

MED08/239 "Utilities Short-Term Power Portfolio Optimization", S. Rebennack, J. Kallrath, P.M. Pardalos (USA)

SESSION T10: DISTRIBUTION SYSTEMS

Tuesday, November 4, 15.45 – 17.45

Chairpersons: N. RAJAKOVIC, C. DEMOULIAS

Introductory Guest Speech: S. J Camarata, Vice President Board of Directors ESRI (USA),
“New Approach Using Geographical Information Systems to Electric Utilities”

MED08/233 “Dynamic Geographic Presentation of Consumed Electricity in Prefecture of Thessaloniki”,
A. Zafeirakis (Greece)

MED08/204 “Methodology of Sectionalizing Low-Voltage Overhead Networks”, N. Rajakovic, V.M. Siljkuć,
D. Nikolic (Serbia)

MED08/184 “Deferral of Network Upgrade Investment Due to Microgrids”, N.D. Hatziairgiou,
A.G. Anastasiadis (Greece)

MED08/165 “A Model of an Urban MV Power Distribution Line Based on Finite Element Calculations”,
A.N. Milioudis, G.T. Andreou, D.P. Labridis (Greece)

MED08/076 “Advanced Reactive Power Compensation in Medium Voltage Distribution Grids”,
I. Sifnaios, A. Silis, G. Doumenis, A. Aggelidis, I. Aravanis (Greece)

MED08/105 “Artificial Intelligence Solution for Power Restoration in Distribution Networks -Thorough
Cost Estimation and Reliability Improvement”, A.S. Bouhouras, D.P. Labridis, A.G. Bakirtzis
(Greece)

SESSION T11: TRANSMISSION SYSTEMS AND SUBSTATIONS

Tuesday, November 4, 15.45 – 17.45

Chairpersons: V. EFTHIMIOU, G. GEORGANTZIS

MED08/099 “Wavelet-Based Method for Transmission Line Fault Detection and Classification During
Power Swing”, C. Pang, M. Kezunovic (USA)

MED08/237 “Intensified Sample Testing of Composite Insulators”, K.O. Papailiou (Germany),
F. Schmuck (Switzerland)

MED08/078 “Software Development for Direct Lightning Stroke Shielding of Substations”,
P.N. Mikropoulos, T.E. Tsovilis, P. Chatzidimitriou, P. Vassilaras (Greece)

MED08/218 “High Voltage Substations Pollution Maintenance: The Use of RTV Silicone Rubber
Coatings”, K. Siderakis, E. Thalassinakis, I. Vitellas, D. Pylarinos (Greece)

MED08/231 “New High-Capacity Aluminium Conductor Composite Reinforced (ACCR) for the Upgrade
of HV Transmission Lines Using Existing Towers and Clearances”,
J.G. Gatopoulos (Greece)

MED08/113 “A Novel High Pressure Atmospheric Discharge Numerical Tool Utilized in Power Industry
Applications”, A.P. Papadakis, G.E. Georghiou (Cyprus), A.C. Metaxas (UK)

MED08/081 “Effect of the Choice of the Decomposition Level on the Success of the Wavelet Packets
Method for Denoising Partial Discharge Signals”, D. Evagorou, A. Kyprianou, A. Stavrou,
V. Efthymiou, G.E. Georghiou (Cyprus), P.L. Lewin (UK)

MED08/175 “Fire Prevention in Electrical Cabinets”, G.G. de Parenti (Cyprus)

SESSION T12: DISTRIBUTED GENERATION

Tuesday, November 4, 15.45 – 17.45

Chairpersons: E. THALASSINAKIS, A. POULLIKKAS

- MED08/195 “Protection Issues in Distribution Networks with Dispersed Generation”, I. Xyngi, A. Ishchenko, M. Popov, L. Van der Sluis (Netherlands)
- MED08/106 “PEM Fuel Cell Model in the Simulation of a Distributed Generation Network”, P.N. Papadopoulos, A.G. Marinopoulos, G.K. Papagiannis (Greece)
- MED08/200 “Reliability Assessment of Power Supply Systems in Industrial and Commercial Facilities Incorporating Distributed Energy Resources”, L.G. Daoutis, E.N. Dialynas (Greece)
- MED08/207 “Investigation of the Distributed Generation Penetration in a Medium Voltage Distribution Network”, A.S. Safigianni, G.N. Koutroumpetis, G.S. Demetzos, J.G. Kendristakis, (Greece)
- MED08/052 “Review of Anti-Islanding Techniques”, S. Lazarou, G. Marmidis, I. Naxakis, E. Pyrgioti (Greece)

Wednesday, November 5, 2008

KEY NOTE SPEECH

Wednesday, November 5, 09.00 – 09.40

Chairperson: E. DIALYNAS

V. Efthimiou (Cyprus), Member of the Advisory Council of the Smart Grids Technology Platform of European Commission, “**Strategically Deploying a Smart Grid**”

SESSION W1: ENERGY EFFICIENCY

Wednesday, November 5, 09.45 – 11.30

Chairpersons: F. TOPALIS, A. KELLAS

- Introductory Guest Speech: D. Spiliopoulos, Managing Director Schneider Electric (Greece), “**Tackling Energy Challenges Through Energy Efficiency Solutions**”
- MED08/119 “Installation of a 5.5 MW Steam Turbogenerator in Hellenic Petroleum Thessaloniki Refinery to Improve Energy Efficiency”, A.P. Argirakis, K.G. Tsita, S.J. Kiartzis (Greece)
- MED08/213 “Energy Efficient Electrical Lighting Technologies: A Challenge for the Future”, G. Zissis, D. Buso, S. Bhosle (France)
- MED08/198 “Policies and Measures Fostering Energy Efficient Distribution Transformers in Europe”, G.A. Vokas, C.A. Bouroussis, F.V. Topalis (Greece)
- MED08/202 “Energy Saving and CO₂ Emissions in Public Buildings: How Important the Network Losses are in the Calculation?”, C.S. Psomopoulos, I. Skoula, A. Chatzimpiros, M. Chionidis (Greece)

SESSION W2: INTELLIGENT DISTRIBUTION NETWORKS

Wednesday, November 5, 09.45 – 11.30

Chairpersons: L. TSOUKALAS, A. SAFIGIANNI

- MED08/186 "Implementation of Large - Scaled AMR - System", T. Papastergiou, P. Katsikas (Greece), G. Brandl, A. Inan (Germany)
- MED08/147 "Planning and Training Tools for Intelligent Power Systems", T. Fiedler, D. Metz (Germany), P.M. Mircea, I. Mircea (Romania)
- MED08/116 "An Evaluation of Distributed Generation Constrained Connection Managers", P. Taylor, S. Jupe, A. Michiorri, C. Berry (UK)
- MED08/074 "Converting Energy Distribution Networks into Smart Grid Networks with the Use of Broadband Over Powerlines Technology", G.I. Tsiropoulos, A. Vazintari, P.G. Cottis (Greece)
- MED08/216 "Design of an Agent Based Virtual Power Plant With Aggregated Load", A.L. Dimeas, N.D. Hatziargyriou, S.J. Chatzivasiliadis (Greece)

SESSION W3: APPLICATIONS OF WIND GENERATION - III

Wednesday, November 5, 09.45 – 11.30

Chairpersons: T. SARAIVA, J. KALDELLIS

- MED08/087 "Advanced Harmonic Permanent Magnet Generator Model for Energy Efficient Wind Turbine Control Systems", A. Haniotis, A. Kladas, J. Tegopoulos (Greece)
- MED08/235 "Electromechanical Power Generator Systems for Large – Scale Speed Variable Wind Energy Converters", C. Sourkounis (Germany)
- MED08/188 "Effect of Increased Wind Power Penetration on Interarea Oscillations Using Eigenanalysis and Prony Techniques", C.D. Vournas, M. Kotlida, G. Tsourakis, A. Metsiou (Greece)
- MED08/048 "Direct Current Conversion and Transmission of Wind Energy With Synchronous Generator", R. Regep (Israel)
- MED08/208 "The Contribution of Variable Speed Variable Pitch Wind Generators in Primary Load Frequency Control", P. Moutis, S. Papatthanassiou, N.D. Hatziargyriou (Greece)
- MED08/123 "Evaluating Power Quality in Wind Power Generation Systems with Two-Level and Multi-Level Converters", R. Melicio, V.M.F. Mendes, J.P.S. Catalao (Portugal)

SESSION W4: GENERAL ASPECTS OF RENEWABLE ENERGY SOURCES

Wednesday, November 5, 09.45 – 11.30

Chairpersons: C. MADEMLIS, N. KOUYIALIS

- MED08/139 "Operational Parameters Variation of an Electromechanical Coupled System Exploiting Vertical Motion of Sea Waves", N.M. Kimoulakis, A.G. Kladas (Greece)
- MED08/189 "Performance Analysis, Testing and Evaluation of a 5 kW PEM Fuel Cell for Stand-Alone Applications", E.I. Zountouridou, N.D. Hatziargyriou, E.I. Zoulias (Greece)
- MED08/164 "Impacts of Renewable Energy on the Greenhouse Gas Reduction in Kosovo - Dynamic Modelling", S. Kabashi, S. Ahmetaj, S. Bekteshi, G. Kabashi (Kosovo)
- MED08/145 "Residue Derived Fuels Production in Greece: An Alternative Fuel for the Power Generation Sector Based in EU and International Experience", C.S. Psomopoulos, A. Batakis, J. Daskalakis (Greece)

MED08/064 “Electrochemical Deposited Cuprous Oxide and Zinc Oxide Films for Solar Application”, V. Georgieva, A. Tanusevski, M. Georgieva (FYROM)

MED08/044 “Floating Solar Chimney Technology Versus Coal Fired Electricity Generation”, C.D. Papageorgiou (Greece)

MED08/226 “Energy Efficiency and Renewable Energy Sources in Province of Vojvodina – Strategy Implementation Program”, R. Ciric, D. Gvozdenac, J. Petrovic (Serbia)

SESSION W5: MICROGRIDS

Wednesday, November 5, 12.00 – 13.45

Chairpersons: G. KORRES, G. CELLI

MED08/100 “Impact of a High Penetration of Microgeneration and μ Grids in the Security of Supply”, P.M.A. Costa, M.A. Matos (Portugal)

MED08/110 “An Estimation of the Cost Reduction Associated to the Use of Microgrids”, L.M. Costa, G. Kariniotakis (France)

MED08/157 “Microgrid Integration in Electricity Markets”, C. Madina, E. Perea, R. Rodriguez, E. Turienzo, E. Zabala (Spain)

MED08/161 “Implementation of Agent Based Control for Microgrids in the Island of Kythnos”, N.D. Hatziaargyriou, A.L. Dimeas, S.J. Chatzivasileiadis (Greece)

MED08/232 “A Pilot Microgrid that Uses Potable Water and Hydrogen Both as End-User Products and Medium to Long Term Energy Storage”, G. Kyriakarakos, E.S. Mohamed, G. Papadakis (Greece)

MED08/060 “State Estimation Techniques for Micro-Grids”, G.N. Korres, N.D. Hatziaargyriou, P.J. Katsikas (Greece)

SESSION W6: RELIABILITY ASSESSMENT OF POWER SYSTEMS

Wednesday, November 5, 12.00 – 13.45

Chairpersons: P. GEORGILAKIS, M. ALEXIADIS

MED08/120 “Distribution Network Risk Analysis”, A.M. Creighton, S.R. Blake, P.C. Taylor (UK)

MED08/135 “Reliability Performance Indices of the Hellenic Power Transmission System”, E.N. Dialynas, L.G. Daoutis, S. Vassos, E. Georgis (Greece)

MED08/156 “Estimating Customer Voltage Sag Performance Through Analysis of Monitoring Records”, J.Y. Chan, J.V. Milanovic, A. Delahunty, C.D. Horne (UK)

MED08/179 “Reliability-Based Asset Management of Transmission Systems: Current Trends and Challenges in a Deregulated Power Sector”, E. Zafiroopoulos, I. Daskalakis (Greece)

MED08/162 “Facts Evaluation Considering Reliability and Economic Performances Under Deregulated Market Environment”, H. Ren, Z. Mi (P.R. China), D. Watts (Chile)

MED08/187 “Component Reliability Parameters and Failure Costs in Railway Power Supply Systems - Athens Metro Case Study”, V. Papada, E.N. Dialynas (Greece)

SESSION W7: TRANSIENT ANALYSIS AND FACTS

Wednesday, November 5, 12.00 – 13.45

Chairpersons: A. BAKIRTZIS, V. CHATZIATHANASSIOU

MED08/075 "Transient Performance of Overhead Transmission Lines Above Stratified Earth of Varying Permittivity", C.G. Kaloudas, T.A. Papadopoulos, G.K. Papagiannis (Greece)

MED08/079 "Electromagnetic Model for Transient Analysis of Impedance to Ground of Horizontal Grounding Systems in Two-Layer Soil", V. Arnautovski-Toseva, L. Grcev, M. Kacarska, K. El Khamlichi Drissi (FYROM)

MED08/168 "Optimal Location of UPFC Devices Using Multi-Objective Optimization", A. Savic, N. Rajakovic, P. Stefanov (Serbia)

MED08/091 "Electromagnetic Transients Analysis of Multiconductor Transmission Lines With Losses, Using Numerical Laplace Transformation", P. Cipo, N. Hobdari, I. Palikuqi, A. Spahiu (Albania), L. Ahma (Kosovo)

MED08/212 "Compliance of Equipment in Accordance with an Adequate Level of Electromagnetic Compatibility", P.C. Stefanides (Greece)

MED08/228 "Analyzing Voltage Dips in Ship Electric Energy Systems", J. Prousalidis, G. Sfakianos, E. Sofras (Greece)

SESSION W8: EARTHING

Wednesday, November 5, 12.00 – 13.45

Chairpersons: A. BRAUNSTEIN, I. STATHOPOULOS

MED08/077 "The Effect of an Earthed Object on the Interception Radius of the Franklin Rod: An Experimental Investigation", P.N. Mikropoulos, T.E. Tsovilis, T. Ananiadis (Greece)

MED08/122 "Influence of the Earth Structure to the Potential Distribution Around a Driven Rod", F.E. Asimakopoulou, V.T. Kontargyri, I.F. Gonos, I.A. Stathopoulos (Greece)

MED08/221 "Signal Analysis and Pattern Recognition Techniques on Leakage Current Measurements", D. Pylarinos, E. Pyrgioti, K. Siderakis, E. Thalassinakis, I. Vitellas (Greece)

MED08/223 "Transient Current Distributions in a Vertical Electrode and the Surrounding Ground", Y. Beck, A. Braunstein (Israel)

MED08/063 "The Influence of the Inhomogeneity of the Field, the Effect of Grounding and the Corona Current to the Dielectric Behaviour of Small Air Gaps", A. Maglaras, F.V. Topalis (Greece)

MED08/127 "Comparison of Substation Grounding System Design Methods Using a FEM Approach", V.N. Katsanou, G.K. Papagiannis (Greece)

PLENARY PANEL SESSION

Wednesday, November 5, 14.45 – 16.00

POSTGRADUATE STUDIES AND CONTINUING EDUCATION OPPORTUNITIES FOR POWER ENGINEERS IN SOUTH EASTERN EUROPE

Chairpersons: E. DIALYNAS, G. PAPAGIANNIS, V. KATIC, V. GLAMOCANIN

SESSION W9: POWER SYSTEM PLANNING

Wednesday, November 5, 16.00 – 17.30

Chairpersons: M. KUSLJUGIC, J. KABOURIS

- MED08/053 "Planning the Interconnection of Islands to the Mainland Grid Via Submarine Cables", M. Papadopoulos, S. Papathanassiou, E. Karamanou (Greece)
- MED08/071 "Differential Evolution Solution to the Market-Based Transmission Expansion Planning Problem", P.S. Georgilakis (Greece)
- MED08/133 "Simulation Model of the Hydro Power Plant VAU DEJES in Albania", E. Saqe (Albania), T. Haase, F. Prillwitz, S.E. Al-Ali (Germany)
- MED08/224 "Planning for Optimal Bioenergy Utilization", G. Celli, E. Ghiani, M. Loddo, F. Pilo, S. Pani (Italy)
- MED08/085 "The Implementation of Rehabilitation Project of Main Hydropower Plants in Albania, A Way for Improvement of Operational Reliability, Safety and Environmental Standards", M. Celso, R. Bualoti, M. Kullolli (Albania)
- MED08/211 "Exact Transmission Power Losses Calculation and Allocation Method", M. Kusljugic, A. Mujcinagic (Bosnia and Herzegovina)

SESSION W10: OPERATIONAL PLANNING - II

Wednesday, November 5, 16.00 – 17.30

Chairpersons: R. BUALOTI, P. MIKROPOULOS

- MED08/050 "Fuzzy Modelling of Load and Cost Uncertainties and their Impact on Power Systems Operation", B.A. Gomes, J.T. Saraiva, L.M. Neves (Portugal)
- MED08/072 "Emission-Constrained Yearly Hydrothermal Scheduling – A MIP Approach", C.G. Baslis, A.G. Bakirtzis (Greece)
- MED08/121 "A Secure Zone 2 Accelerated Trip Scheme for Non-Pilot Distance Protection", C.A. Apostolopoulos, G.N. Korres (Greece)
- MED08/158 "Active Utilisation of Governors for Power System Stabilization", S.K. Yee, J.V. Milanovic, F.M. Hughes (UK), J. Dragosavac (Serbia)
- MED08/124 "Influence of Power Transformer's Phase Shift and R/X Ratio of Power Line Conductors on During-Fault Voltage", M.N. Moschakis, N.D. Hatziargyriou (Greece)
- MED08/154 "Reduction of NO_x Emissions by Regulating Combustion Parameters Based on Models Extracted by Applying Data Mining Algorithms", C.A. Athanasopoulos, V. Chatziathanassiou, F. Kerasidis (Greece), G. Athanasopoulos (Spain)

SESSION W11: APPLICATIONS OF PHOTOVOLTAIC AND HYBRID SYSTEMS

Wednesday, November 5, 16.00 – 17.30

Chairpersons: S. TSITOMENEAS, S. KIARTZIS

- MED08/128 "Hybrid Renewable Energy Systems for the Supply of Services in Rural Settlements of Mediterranean Partner Countries - The HYRESS Project", G. Papadakis, E.S. Mohamed, G. Kyriakarakos, E. Kyritsis, S. Kyritsis (Greece), A.S. Kassem (Egypt), A. Linares, L. Ovidio (Spain), J. Bard, B. Panahandeh, R. Janssen (Germany), A. Outzourhit (Marocco), A. E. Khazen (Tunisia),
- MED08/143 "Analysis of a Stand-Alone Power System Based on Solar and Wind Energy With Hydrogen Long-Term Storage: Operational Experience and Control Studies", D. Ipsakis,

F. Stergiopoulos, S. Voutetakis, P. Seferlis, S. Papadopoulou, C. Elmasides, C. Ziogou (Greece)

MED08/170 "Theoretical Simulation and Experimental Analysis of a PV-Based Water Pumping System", E. Meidanis, G.A. Vokas, J.K. Kaldellis (Greece)

MED08/181 "Powering the Telecommunication Repeaters by a New Efficient Photovoltaic Maximum Power Point Tracker", S. Tsitomeneas, A. Kokkosis, A. Charitopoulos (Greece)

MED08/152 "Determination of Genetic Parameters for Optimization of the Hybrid PV-Diesel Systems with Genetic Algorithms", D. Dimitrov, Z. Andonov (FYROM)

SESSION W12: DEMAND SIDE MANAGEMENT AND POWER SYSTEM AUTOMATION

Wednesday, November 5, 16.00 – 17.30

Chairpersons: V. GLAMOCANIN, G. PAPAGIANNIS

MED08/206 "Application of Substation Automation System in the Substations of PPC's Transmission Network", J.C. Alexandris, A.D. Georgopoulos (Greece)

MED08/217 "Energy Optimisation of the Water Supply System of an Area - Application at the Area of Chania", N. Kakogiannis, G. Papavassilopoulos (Greece)

MED08/173 "Thermal Model Predictive Control for Demand Side Management Cooling Strategies", P. Romanos, J. Schmid, I. Stadler, P. Zacharias (Germany)

MED08/094 "Load Disturbance Rejection in a Hydro Generator Local Network Operation", T. Puleva, E. Garipov, E. Haralanova (Bulgaria)

MED08/130 "Evaluation of a Supply Side Management and a Demand Side Management Policy Implemented in the Greek Electric Sector", I.P. Panapakidis, G.K. Papagiannis (Greece)

MED08/144 "Industrial Energy Management System", M. Kacarska, S. Veleva, V. Glamocanin (FYROM)

CLOSING SESSION

Wednesday, November 5, 17.30 – 17.45

Chairpersons: A. KOKKOSIS, N. KOUYIALIS, A. BRAUNSTEIN