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### ENERGY SECTOR NUCLEAR GRID

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## 9<sup>th</sup> SLOVAK ANNUAL CONGRESS ON POWER AND ENERGY held under auspices of Ministry of Economy of the Slovak Republic

#### April 24–25, 2012

Bratislava Palffy Palace, Zámocká street

www.cesys.sk www.erasmus-info.sk











































ENERGETIKA











MEDIA





## **MIR.1200**





Dear colleagues, ENKO 2011 participants,

Several days ago the 9<sup>th</sup> Annual International ENKO 2012 Congress, entitled "SCHIZOPHRENIA OF THE EUROPEAN ENERGY SECTOR – RENEWABLE, NUCLEAR ENERGY, SMART GRIDS ... – CONFLICT OR PARTNERSHIP?", finished.

This year we put the attention, among other topics, to the development of the energy sector in the framework of post-Fukushima syndrome influence. The impact of this event is strong and affects not only public, politicians, but also engineers and developers, redirecting financial flows into new technologies, more safe than before, including renewable energy. We passed through the interesting panel discussions on black-out threads and the bases for future energy development. Other interesting topics concerned of smart grids, ditrict heating and traditionally of the very important issue – nuclear energy.

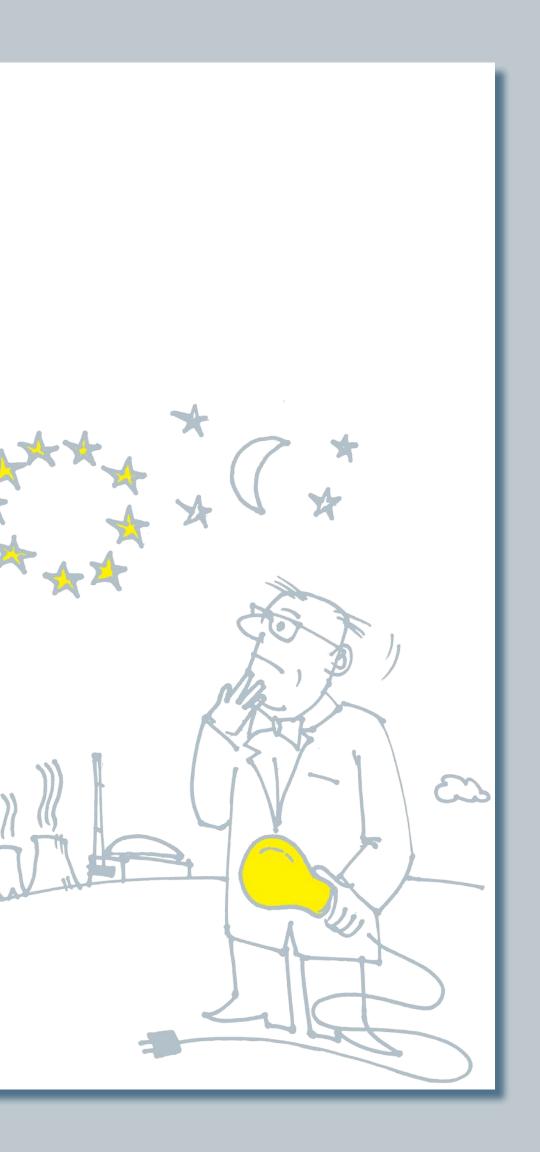
We are convinced that our Congress supported discussion on how to develop energy sector, and to find starting points for further sustainable development.

Let us thank you for your active participation and creation of informal pleasant social atmosphere.

We are looking forward to meeting you on the next 10<sup>th</sup> Annual Congress ENKO 2013 in Bratislava.

Ľuboš Tomík ENKO 2011 Congress Chairman

Jiří Marek ENKO 2011 Congress Vice Chairman



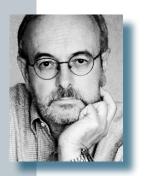


#### **Ľuboš TOMÍK, Jiří MAREK** congress chairman and vice-chairman – congress opening



#### **Ľuboš TOMÍK** Congress Chairman, CESys s.r.o.

Director of consulting company CESys Ltd. working in the field of energy. After graduating ČVUT, Faculty of Engineering with specialization on nuclear energy he worked in SE, a.s. During establishing of Nuclear Regulatory Authority of the Slovak Republic he worked in the field of probabilistic safety assessment. He gained experience in abroad in number of industry and energy companies. During last years he worked as manager in foreign IT companies solving the opening and deregulation of Slovak energy market. During the period of 2002 – 6 he was managing director of CENS (Centre for Nuclear Safety), international company working on the region of Central and Eastern Europe. Regarding the SE, a.s., privatization he is author and co-author of various studies performing energy market scenario modeling, i.e. Feasibility Study on NPP Mochovce 3 and 4 Completion for Ministry of Economy of the Slovak Republic.



#### **Jiří MAREK** Congress Vice-Chairman, JMM consulting

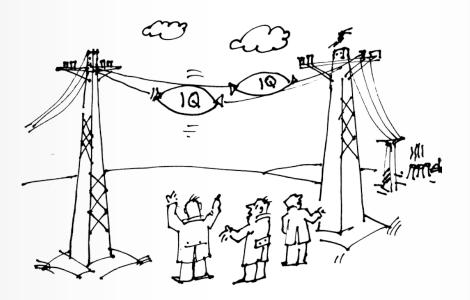
He is the consultant in the field of power industry and is the Executive Head of JMM Consulting, Ltd. – a company focused on advisory services and organization of professional activities. After graduating from the Czech Technical University, Faculty of Technical and Nuclear Physics, he worked in research; he has been working in the power industry field since 1974 (until 1996 in ČEZ). For the last eighteen years, he was the advisor of the Minister of Industry and Trade, Chairman and Vice-Chairman of the Supervisory Board of ČEZ, a member of supervisory boards in several energy distribution companies, and an advisor of Deputy Ministers of Finance. In these positions, he was dealing with the reorganization of state administration in power industry, the development of state energy policy, the establishment of the State Office for Nuclear Safety and with the preparation of the privatization of Czech power industry. He is occupied by publication activities, mainly in the field of nuclear power industry and has wide experience in organizing of international and specialized professional conferences and meetings. His positions are quoted on TV, radio and in economic periodicals.



#### SESSION

IREMENTS EUROPEAN RE QU ΟF ER G LΕ ΕN G S ΑΤ  $\bigcirc$ Ν \_\_\_\_ A R B O N T A X Ν А Ν ()S LUTION FOR GR S O SMA D S — CERS, PR U ΝΕ Ε ΟD 0 — ΒU ΟΝ AND CUSTOMERS D R S • SLOVAKIA AND URANIUM

Session Chairman: Ľuboš TOMÍK







#### Ján PETROVIČ General Director, Department of Energy, Ministry of Economy of the Slovak Republic

#### REQUIREMENTS OF THE EUROPEAN ENERGY LEGISLATION

After graduating the Technical University of Košice, Faculty of Mining, he started his professional career in the mining company Baňa Dolina, a.s., in Veľký Krtíš. Since 1995 he has been working at the Ministry of Economy of the Slovak Republic in several positions; during this period he was a member of the Board of company Želba, a.s., Spišská Nová Ves and member of Supervisory Boards of companies Východoslovenské energetické závody, š.p., Košice, Transpetrol, a.s., Bratislava and Zvolenská teplárenská, a.s., Zvolen. In 2004 he became the director of Energy Policy Section and since November 2007 he is undertaking the function of Department Energy General Director. In this position Mr. Petrovič is responsible for the creation of the state energy and raw materials policy, energy and mining legislation, international relations (EC, EU, IEA, ECT, CEI). He is further responsible for the state administration performance designated by law as power industry (including nuclear), renewables, energy efficiency, gas industry, heat power sector, oil industry (including biofuel), and mining and treatment of ore and non-ore mineral raw materials and fuel.



#### Antonello BUONDONNO Head of Europe and Americas Business Development, Enel Infrastructure and Network Division, Rome

#### DEVELOPING IN THE SMART METERING AND SMART GRID BUSINESS

A. Buondonno graduated with a Master in Mechanical Engineering in Rome University with 110/110 grade cum laude, and with an MBA in Bocconi University of Milan. He has 10 years of experience in Consulting, initially in McKinsey&Co and later in Bain&Co in Italy, with several projects in Europe and US, mainly in Energy and Trasportation; his responsibilities as Partner included development of Firm reputation and client base, establishment of relationship with top client executives, leading multiple engagements, coaching and development of consultants and development of Firm Know-how. In '98 joined Enel where he has further developed his experience in the Energy business, managing several key positions: Head of Organizational Development and Process Reengineering, with the responsibility of designing and implementing major ICT and change management project (SAP, Contact Center, Meter Data Management system); Head of Real Estate, leading major restructuring projects of Group offices space and operating bases; Chief of Marketing and Sales of Enel Sole (Enel Group ESCO), specialized in smart lighting / LED based solution. Now leads Europe & Americas Business Development for the Infrastructures and Networks Division, with the responsibility of developing the Group presence in the smart metering and smart grid business.



#### Andrej JURIS Chairman of the Board of Directors, ZSE Distribúcia (Member of E.ON Group), Bratislava

#### SMART GRIDS DEVELOPMENT IN SLOVAKIA: EXPECTATIONS VS. NEEDS

After graduation at the Slovak University of Technology in Bratislava, Faculty of Mechanical Engineering (1988) he worked in Hydrostav and later in the Antimonopoly Office of the Slovak Republic (1990–94), where he was in charge of assessment of corporate mergers and competition policy enforcement. Since 1994 he worked at NGO "Centre for economic development", where he undertook independent economic analyses. During 1995-1997 he studied economics and public policy at the University of Princeton and graduated as "Master of Public Administration" (MPA). Till 2004 he worked at the US consultancy company NERA, where he dealt with issues of restructuring and regulation in the energy sector. Since 2004 he has been working in Západoslovenská energetika.



#### **Dušan ŠPELINA** Managing Consultant, Logica Czech Republic s.r.o., Praha

#### NEW SOLUTIONS FOR EFFICIENT NETWORK MANAGEMENT AND ENERGY USAGE IN SMART GRIDS

Dušan Špelina graduated in 1995 from Faculty of Applied Sciences of University of West Bohemia in Pilsen. In Logica he works as Managing Consultant for energy and utilities sector. In the long term, he concerns with area of liberalized energy markets, optimization of enterprise process and application of information technology for utilities. He has taken part on many important Logica's projects in the Czech Republic as well as abroad, among others he participated in the design and building of the infrastructure of Electricity Market Operator in the Czech Republic.



#### Boris BARTALSKÝ Director, Ludovika Energy, Ltd., Banská Bystrica

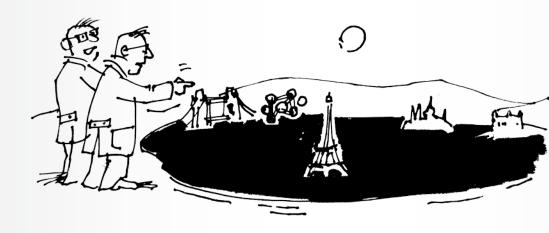
#### URANIUM, THE IMPORTANT SLOVAK ENERGY SOURCE

Mr. Bartalsky has more than 25 years of experience in geological exploration, and he deals with diff erent project in economic geology and exploration in Slovakia. Graduated from the Technical University of Košice, in economic geology. His scientific degree in economic geology (PhD.) he got from Charles University in Prague, where he defended thesis with topic "Metalogenetical problems of Spis-Gemer Ore Mountains". In the past years he was the Managing Director of Slovenska geologia (Slovak geology, state enterprise), later he acted as Deputy Director for Applied Geology, Geological Survey of Slovakia. Since 2004 he has been managing Ludovika Energy Ltd., focusing on exploration of the uranium mineralization; the project is fi nanced by European Uranium Resources Ltd. Mr. Bartalský is a member of the Slovak geological associations, a Registered Member of the Australian Institute of Mining and Metallurgy (AusIMM) and Registered Member of the Society of Mining Engineers (SME).

#### SESSION 2

presentations and panel discussion of the high representatives of the national transmission grid operators from Slovakia, Czech Republic and Poland IN ТНЕ CEN RAL BLACK-OUT OR R F Ν А FΑ  $\bigcirc$ EAS PREVENT R F F ТО ( $\square$ F FLOWS, AND Н ΗΟ W ΕN А Ν  $\bigcirc$ SECURITY OF ELECTRI Y С ΙT

Chairman: Jiří MAREK



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#### **František PECHO** Director of Dispatch Centre, SEPS (Slovak transmission grid operator), Bratislava

#### CRITICAL SITUATION IN THE SLOVAK POWER TRASMISSION SYSTEM

After graduating the Slovak University of Technology, Faculty of Electrical Engineering he started to work in SEP, š.p., later in ZSE, a.s. and SE, a.s. Since 1991 he was preparing the project Datagyr C500 – the system for long-distance data collection from electrometers. After system completion he managed its op eration. He worked also in international committees and took part on connecting of Slovak transmission grid to European grid. After the institutionalizing of the transmission grid operator (SEPS Company) in 2001 he worked on position of managing director for investments, later for IT and telecommunications; he managed a Slovak dispatch centre and operation; at the same time he was Member of the Board of Directors. He took part on all important Company proj ects from the beginning till October 2006. Leaving the SEPS Company, he provided consultancy services in OKOnet, a.s. From 2007 he worked as production manager at energy company Liv Elektra, Inc. and as a Member of Board of Bioenergetická spoločnost, Inc., which dealt with the building of RES. In 2010 he was director of development at ALTERENERGO Inc., company building the renewable energy sources. Since November 2010 working again in SEPS as managing director for Slovak Energy Dispatch Centre.



#### **Miroslav VRBA** Member of the Board of Directors, ČEPS (Czech transmission grid operator), Prague

#### BLACK-OUT IN THE CENTRAL EUROPE - FICTION OR A REAL THREAT?

A graduate of the Czech Technical University in Prague, Faculty of Electrical Engineering (M.Sc. in Economics and Management, 1982), where he received also a scientific degree PhD. From 1986 till 1993 he worked at the Institute of General Energy of the Academy of Science. After that he spent twelve years of his professional career with Czech dominant electrical power producer ČEZ at diff erent positions like Strategy Director or Director responsible for scheduling and dispatching of power plants units. Since 2005 he is a Member of the Board of Directors of the Czech Transmission System Operator, state owned company ČEPS, responsible for dispatching management and for information and communication systems. M. Vrba became the Chairman of the Czech Energy Committee of the World Energy Council in 2006. He is a member of the Supervisory Board of the Association of Energy Managers and member of the Executive Committee of the Technology Platform "Sustainable Energy".



#### Konrad PURCHAŁA Director, Market Development, Polskie Sieci Elektroenergetyczne Operator S.A., Konstancin Jeziorna

#### IMPACT OF UNPLANNED POWER FLOWS ON SYSTEM SECURITY AND MARKET EFFICIENCY

Konrad Purchała received a M.Sc. degree in electrical engineering in 1999 from Warsaw University of Technology, and Ph.D. from University of Leuven in Belgium for his work on management of congestion in liberalized electricity markets in 2005. From 2005 till 2009 he was with Power System Consulting of Tractebel Engineering from the GdF-SUEZ group in Belgium, where he was an expert in techno-economic studies. His main interest is electricity market design, focusing on the interactions between the technical aspects of power systems and the economics of electricity markets. His references range from the studies for DG TREN on the integration of European balancing markets and inter-TSO transit compensation schemes, to capacity auctioning and market coupling algorithms for the TLC market coupling between Belgium, Netherlands and France. He also took an active role in large European research projects on distributed generation, wind energy integration and institutional support for tackling future R&D challenges of the European TSOs.

#### SESSION 3

presentations and panel discussion of experts from Slovakia, Czech Republic, Germany and Austria OF ТНЕ RISKS AND BENE S STRATEGIES FUTURE • CONFLICT OR THE AND PARTNERSHIP ?

Chairman: Michal HUDEC, publisher of web portal energia.sk



Michal Hudec is a chairman of "energy online, Inc.", a company publishing "energia.sk" web portal, specialized analytical web focused on energy issues, where Michal acts as the publisher. At the same time, he is appointed as National Contact Point for "Energy" issues in the supporting structures of the 7th EU Framework Program for Slovakia, and a member of the Supervisory Board of Geothermal Anywhere, Inc., which is focused on research and development of ultra-deep drilling technologies. Michal graduated from the Faculty of Philosophy, Comenius University in Bratislava. He is "U.S. State Alumnus" at IVLP U.S. Department of State's elite program, topic "U.S. Foreign Policy and Energy Security".



## VARIOUS THE PRESENCE



#### **Konstantin E. JACOBY** independent consultant (Energy – Eastern Europe), Germany

#### QUESTION TO ENERGY TURNAROUND: "IS IT REALLY THATGREEN AS PROMISED?"

Konstantin Jacoby was graduated in mathematics and computer science at the University of Munich where he got also the PhD degree in applied mathematics. He started his professional career 1984 as assistant lecturer at the University of Munich, and 1987 he joined Siemens R&D Centre in Munich from where he moved 1995 to Siemens Power Generation Group (the former KWU), where he was for several years responsible for personnel training for nuclear and fossil fi red power plants world-wide and for the company's NPP emergency response centre in Germany. After the process of merger and consolidation of the German and French NPP manufacturers he is in the position of Regional Director Marketing of the AREVA NP GmbH, 2003-2006 for Russia, since 2007 for CR & SR, since 2009 in the position of project manager in Ukraine, where he managed the sales for AREVA NP business group of reactor services. In 2012 he founded his own company in Bratislava (EEE JacobyKo Ltd.) aimed at providing independent technical-institutional advice and support services for energy systems and industry of Central and Eastern Europe.



#### **Kristián TAKÁČ** Former State Secretary MoE, Bratislava

#### SCHIZOPHRENIA OF THE EUROPEAN ENERGY SECTOR AND SLOVAK POSSIBILITIES

Kristián Takáč was graduated from the Faculty of Social Sciences, Charles University in Prague (2001) and from the Bratislava University of Law (2011). During his studies he passed the scholarships at the Lomonosov Moscow State University, Department of Asian and African Studies (1999), and at the University of Durham, Ustinov Institute of Slavonic Studies (2000). His professional carrier started as a PR manager for Visa Lund AB in Sweden, in the years 2002–2005 he worked in Stockholm Region Office in Brussels. In 2005 he joined the European Commission, DG Employment and Social Affairs (project manager and coordinator for the institutional relations). Since 2009 he worked at the Directorate General for Energy, Internal Energy Market Unit. From 2011 till April 2012 he acted as the State Secretary of Ministry of Economy.



#### **Stefan P. SCHLEICHER** Professor of Economics, Wegener Center for Climate and Global Change, University of Graz

#### SCANNING THE FUTURE OF THE EUROPEAN ENERGY SYSTEM

Stefan P. Schleicher obtained his academic degrees from the University of Technology in Graz and the University of Vienna. He held academic positions at the Institute for Advanced Studies in Vienna, the University of Bonn, the University of Pennsylvania in Philadelphia and Stanford University. Currently he serves as a consultant to the Austrian Institute of Economic Research in Vienna. His research focuses on economic modeling and economic policy issues with special emphasis on sustainable structures in the context of energy and climate. Recent research activities includes: "Energy2030-AT – Austrian energy perspectives for 2030", "Beyond-20 – Evaluation of more ambitious EU energy and climate targets for 2020", "Energy Transition – The transition to low energy structures for 2012, 2020 und 2050", "NREAP-AT – National Renewables Energies Action Plan for Austria", "TranSust.Scan – FP-7 EU project for the transition to sustainable economic structures", "EU Emissions Trading Scheme – The evidence since 2005 and the agenda after 2012", and "Intergovernmental Panel on Climate Change (IPCC) – Co-author of the Fourth Assessment Report".



### **Tomáš HÜNER** Chairman of Supervisory Boards of ČEPS (Czech transmission grid operator) & OTE (Czech electricity and gas market operator), Prague

#### CZECH POWER SECTOR ON THE CROSSROAD, WHAT EXTERNAL INFLUENCE WILL IMPACT ON ENERGY CONCEPT

In the years 1978–1984 he studied at Brno Technology University, Department of Thermal Machines and Nuclear Power Facilities. From 1984 to 1994 he worked in the ČEZ, Dětmarovice Thermal Power Plant, most recently as Deputy Director for operation and technology. In the year 1994 he was appointed as Chairman of the Board and CEO of SME (regional electricity distributor). In connection with that, he held many positions in Boards of companies from the energy and financial sector and public sector as well. In 2002 he became consultant in AP&P consulting company, where he participated i.e. on the restructuring of the state owned Slovak Power Company Plant. In 2004 he took up the position of the Country Manager of CEZ in its acquisition in Bulgaria. From September 2006 till September 2011 T. Hüner acted as Deputy Minister of Industry and Trade responsible for energy sector. In connection with that he acted in the number of Boards of state owned companies, nowadays he is Chairman of the Supervisory Board of ČEPS (Czech Transmission Grid Operator) and Chairman of the Supervisory Board of OTE (Czech Electricity and Gas Market Operator).



#### **Pavol ŠIROKÝ** climate campaigner, Greenpeace Slovakia

#### SLOVAK POWER OPTIONS IN THE ACTUAL EU ENERGY DEVELOPMENT

P. Široký is graduated from the Faculty of Natural Sciences, Comenius University in Bratislava, Department of Geology, specializing in engineering geology and hydrogeology (2002). Between 1993 and 1994 he worked as a Greenpeace activist. In 1994 he founded a NGO "For Mother Earth" where until now is working as coordinator of the energy program. During the past 17 years he worked on several projects regarding energy in Slovakia and abroad. He focuses on climate change, energy savings and energy efficiency, renewable energy, fossil and nuclear energy. He is the author of several studies, information materials for professionals and general public, organized a number of conferences and seminars on energy and climate. P. Široký pays attention to public campaigns, publishing, work on legislation (comments and preparation of laws, decrees and regulations), and the preparation of technical materials, lectures and training activities. He found a network of NGOs called Slovak Climate Coalition. Since April 2011 is working as climate campaigner for Greenpeace Slovakia.

# At the end of the official Tuesday's program, a ceremony took place during which the **ENKO award** for the life time contribution in the energy field was handed over to **Jozef MIŠÁK**, the first Chairman of the Slovak Nuclear Regulatory Authority.

The official ceremony was held in the presence of Tomáš MALATINSKÝ, Minister of Economy of the Slovak Republic, Jakub KARFÍK, Ambassador of the Czech Republic in Slovakia, Vladivoj ŘEZNÍK, Deputy Director General and Director of Engineering of Slovenské elektrárne, member of Enel Group, and Karol PAVLŮ, last year's ENKO award laureate.



# The ENKO award for the life time contribution in the energy field $Jozef\,MI\check{S}\check{A}K$



Jozef Mišák is a graduate of the Faculty of Nuclear Science and Engineering, Czech Technical University in Prague (1970), from where he also received his PhD degree (1980). He has 42 years of experience in nuclear field practically permanently working in the area of nuclear safety. After short period of lecturing at the Faculty of Nuclear Science and Engineering, during period of 1971–1977 he worked at Power Research Institute Bratislava as a head of Accident Analysis Unit. From 1978 until 1992 he worked in VUJE Trnava at various posts starting as a head of Accident Analysis Unit through a head of **Department for NPP Operational** Regimes, deputy director for nuclear safety, up to a director of the Institute. During the period 1993–1997 he was the first chairman of the Nuclear Regulatory Authority of the Slovak Republic, **Governor and Vice-Chairman** of the IAEA Board of Governors (1994–1996), a member of the IAEA Advisory Commission on Safety Standards. He has been extensively involved in IAEA activities related to design, operational and regulatory aspects relevant for nuclear safety with numerous participation in IAEA safety review missions. During the period 1998-2004 he was a head of the IAEA Safety Development Unit, responsible for development of safety standards and other publications in the area of safety assessment, when he was involved in the development of about 20 IAEA documents. Since 2005 he has been working in the Nuclear Research Institute Rez as a direc-

management and coordination of nuclear safety matters in connection with major nuclear projects of the Institute with the objective to ensure compliance with the national and international safety requirements. Last several months he played an important role in the European stress tests representing regulatory bodies of Slovakia and the Czech Republic as a member of the Governing Board and a topical leader for the area of severe accident management. Jozef Misak is a member of the Nuclear Safety **Council for the Slovak Nuclear** Regulatory Authority, a member of the President's Council for Nuclear Energy Safety of Armenia, a member of the Reactor Safety Council for the Ukrainian nuclear regulatory body, a member of the State Examining Commission and of the Commission for PhD Degrees of the Faculty of Electrical Engineering of the Slovak Technical University, a member of the Governing Board of the Sustainable Nuclear Energy Technology Platform, a corresponding member of the Board of Directors of the Center for Reactor Information, Argonne, USA, a member of the Technical Advisory Committee at the Italian **Technical Support Organization** ITER Consult, a member of the International Steering Committee of the 2nd Level Master Course in Nuclear Safety & Security at University of Pisa, a vice-chairman of the Instrument for Nuclear Safety Cooperation Task Force (FO-RATOM). He has published more than 100 research reports, and more than 200 technical articles and conference papers mainly in the area of nuclear safety.

tor for strategy focusing mainly on







### SESSION 4

RENEWABLES - STRATEGY AND GEOTHERMAL POTENTIAL • POST-FUKUSHIMA SYNDROME – WILL A NEW INVES ΕΝΤ ΒE Μ ТНЕ COMPE ΟF IVE ΕS S • HEAT SUPPLY -NUCLEAR  $W \mid$ LL HEATING UNITS FIND THEIR USE ?

Session Chairman: František PECHO



# WORTHIT? DISTRICT

#### Teplo zo vzduchu



#### **Eugen BENČAT** Managing Director, GEOSUN SK, Ltd, Handlová

#### THE ENERGY OF THE EARTH AND THE SUN IN YOUR SERVICES THROUGH THE HEAT PUMP

He graduated from the Faculty of Mechanical Engineering, Slovak University of Technology in Bratislava. He installed first heat pumps BW (CARNOBLOC) and AW in cottages in Bojnicice – Hlboke, which were put into operation 17th July 1992. In the years 1995–2001 (JOEKOPAV, Ltd.) and 2001–2004 (EKONATURA Ltd.) he was responsible for the production and supply of biomass boilers Hager – up to 3MW and heat pumps Natura – up to 100 kW (Geschäftsbereich SATAG Thermotechnik, Switzerland), today Viessmann. Since 2004, he mainly deals with the installation of heat pumps WATERKOTTE – up to 500 kW. As a specialist in heat pumps and heating / cooling capillary mats he was involved in energy project Green Košice, building of Honors, Inc. – VEOZEDIS Košice, Economics Research Center of renewable energy sources and distribution systems.



#### Ján PIŠTA Director, Purchase and Management of Portfolio, SSE (Central-Slovakia Power Co.), Žilina

#### IMPACT OF THE LAST YEAR'S EVENTS ON THE FUTURE PRICES OF ENERGY COMODITIES

He graduated in Physics of Solid Materials (Faculty of Mathematics and Physics, Commenius University in Bratislava, 1988). After that he was associated with Electro-technical Institute of the Slovak Academy of Sciences. From the year 1990 he has worked in SSE Central-Slovakia Power Co.), Žilina. His career he started as programmer – analyst with the project of Customer Information System (CIS). He was leader of project for automation of electronic meter reading, outsourcing of meter reading and complex system for electricity trading. He participated on the creation of the energy legislation, methodology and rules of electricity market. From 2006 he manages the Section of Purchase and Portfolio Management of SSE.



#### **Alain MANGION** Founding Managing Director and Shareholder of Credinvest International Corporate Finance, Malta

#### ISSUES AND PROBLEMS RELATING TO PROJECT FINANCINGIN ENERGY POST CRISIS

Alain Mangion, obtained his academic degrees from the University of Malta in Valetta in the fields of trade crediting (PhD, 1997) and marketing service guality (Bachelor of Arts) upon a professional career in auditing and accountancy in UK at Ernest and Young in London until 1987 and in senior management consulting in Malta for a leading international auditing and accounting firm (until 1991). In 1993, he decided to set up Credinvest International, a corporate finance solutions firm, being practice born and working to advise companies on how to finance their projects and how to come up with the appropriate costeffective structures, operating internationally in the markets of Italy, Austria, UK, Romania, Bulgaria, Moldavia, Russia, Czech Republic, Slovakia, Latvia etc. Current and previous projects include positions of Financial Advisor to the Romanian Ministry of Transportation, Consortium Partners and Financial Arranger for Bukarest-Pitest highway, Consultancy to Romanian subsidiary of the French energy group Alstom, Financial Consulting to private investors for 90 MW wind farm in Latvia, Advisor in purchasing government-owned carbon credits (Latvia, Romania, Bulgaria), Advisory work for municipal investment arrangements for waste to energy treatment plants to meet "Eco-City" target (Bulgaria), Advising international group on investment in solar energy projects as well as for private in CGPP (Istanbul, Turkey). Alain Mangion is Member of the Malta Chamber of Commerce, and was lecturer in finance and financial accounting for the University of Maastricht-Malta Institute of Mnagement (MBA Outreach Programme), founder of the Malta-Bulgaria Business Council and PR Officer of the Malta Serbia Friendship Society. He contributed to corporate finance and business issues publications of the Malta Business Weekly.



paper presented by Alfred K. Weinberger



### Kamil BLAŽEK Partner, Kinstellar, law firm, Prague Office

#### RISKS IN FINANCING ENERGY PROJECTS – THE CURRENT OUTLOOK

Kamil Blažek graduated from the Law Faculty of Charles University in Prague; he has also studied law at the University of Regensburg. He has worked in the legal profession since 1996 (from 2000 in the Czech offi ce of the global law firm Linklaters). Since 2008, he has been a partner at the international law firm Kinstellar, where he focuses mainly on energy law and related fields, such as corporate law, project finance and infrastructure. He has advised both domestic and foreign energy companies, such as RWE, EON, Ruhrgas, Electrabel, GDF SUEZ or ČEZ. He has also participated in major projects in the field of energy infrastructure, regulation, trade within the European Union, and mergers and acquisitions of energy companies. Mr. Blažek is a member of Association of Energy Managers, the Czech Nuclear Society and the chairman of The Association for Foreign Investments (AFI). His published writing includes a number of articles about the field of energy. He has worked on transactions in numerous countries in Central and Eastern Europe, as well as in Russia, Ukraine and China.



**Miroslav NOSÁL** Chairman of the Board of Directors & CEO, Tepláreň Košice, a.s., (Košice district heat power plant)

#### COMPETITIVENESS OF THE DISTRICT HEAT SUPPLY

He graduated from the Czech Technical University in Prague, Faculty of Electrical Engineering (M.Sc. in Economics and Management of Power Systems, 1988). Mr. Nosal worked for several financial institutions including Patria Finance, Merrill Lynch, VUB and PPF Investments. He also kept a top management position at Cechofracht. He has been working as Chairman and CEO of Teplaren Kosice since 2011.



**Jitka MATĚJKOVÁ** representative of the student's thinktank, Brno University of Technology

#### SMALL NUCLEAR UNITS, DEVELOPMENT AND POSSIBLE USE – OPPORTUNITY FOR THE DISTRICT HEATING

Ladislav Suk, Veronika Hniličková, Filip Novotný, Jitka Matějková a Miroslav Švihel are the students of the fi nal year of Master's degree at the Faculty of Mechanical Engineering, Energy Institute, and the Faculty of Electrical Engineering and Communication, Electrical Power Institute, Brno University of Technology. Together they meet on the project dealing with small nuclear reactors applicable for district heating. They focused earlier on energy issues in their Bachelor's work; in their Master's works they continue at energy topics, mainly in nuclear field. The current joint project is guided and supervised by Karel Katovský and Hugo Šen, Assistant Professors of Brno University of Technology.



#### SESSION 5

PREDICTION OF THE EUROPEAN NUCLEAR ENERGY FUTURE • NEW ADVACED REACTORS - THE TECHNOLOGICAL DRIVING FORCE ΟF DEVELOPMEN SL O V A K • POWER AFTER THE STRESS • MOCHOVCE 3,4 COMPLETION

Session Chairman: Ľuboš TOMÍK



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NUCLEAR
 TESTS
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#### **Ivo KOUKLÍK** Vice-President, Rosatom Overseas, Moscow

#### THE FUTURE OF NUCLEAR ENERGY IN CENTRAL AND EASTERN EUROPE FROM ROSATOM PERSPECTIVE

After graduating the Czech Technical University, Faculty of Nuclear Science and Physical Engineering in 1983, he worked in Dukovany NPP in several positions beginning as reactor operator, from 1998 in top management positions (Safety and Investment Director, Responsible Manager for reorganization of Temelin and Dukovany NPPs, Dukovany NPP Director). Further he held the positions of the ČEZ Nuclear Safety Division Director, and the ČEZ Engineering and Technical Development Director. Since 2006 he worked as Project Manager responsible for Temelin Units 3&4 development. Further, since 2009 he acted as the Chairman of the Board of Directors of ČEZ Bohunice jsc., and as Technical Director and Vice Chairman of the Board of JESS, jsc. – company preparing New Bohunice Unit. He took part on IAEA missions OSART, ASSSET and PROSPER for several NPPs (Gravellines, Kozloduj, Pakš, Kashiwazaki- Kariwa). He spent three months training with US NRC. In the year 2011 I. Kouklík was appointed the Vice-President of Rosatom Overseas.



Jean-Claude LEFEVRE AREVA NP, Reactors & Services business group, Products & Technology business unit

#### GEN IV REACTORS, AREVA'S PERSPECTIVES

Jean-Claude Lefevre, formerly an offi cer of the Engineer Corps of the French Navy, graduated from the National Institute for Nuclear Science and Technology at Saclay, and the Institute of Business Administration at Paris-IX University. He has spent his entire career with the AREVA group in units dedicated to fast reactor engineering and construction, participating in the Superphénix project in France and the Kalkar (SNR 300) project in Germany. Further he was a Project Manager of the EFR (European Fast Reactor) programme. Currently he is a member of the ASTRID Project Team and acts as Senior Adviser for the economic assessment of energy producing systems and the fi nancial evaluation of investment projects on behalf of other units.

#### **Peter UHRÍK** General Director, Department of Safety Evaluation and Inspection Activities, Nuclear Regulatory Authority of the Slovak Republic

#### NUCLEAR SAFETY OF NPPS IN THE SLOVAK REPUBLIC – RECENT DEVELOPMENT AND THE RESPONSE TO THE FUKUSHIMA ACCIDENT

Peter Uhrík started his nuclear career during studies on Slovak Technical University where he was oriented toward nuclear power. After passing university in 1983 he started to work at Slovenske Elektrarne NPP Bohunice as control room operator. He worked at various positions in the control room and also as a plant shift supervisor. From this position he became plant outage manager. From 1999 he has been working at Nuclear Regulatory Authority of the Slovak Republic, at first in position Head of Operation Safety Department and from 2005 as General Director of Nuclear Safety. He is a national representative in Nuclear Safety Standard Committee – IAEA, Working Party of Nuclear Safety – EU, Working Group for Reactor Harmonization – WENRA. He also participated on IAEA OSART and expert missions in France, Bulgaria, Lithuania and Pakistan.



#### **Jozef ZLATŇANSKÝ** Manager, Independent Department for Safety Evaluation, SE - Member of Enel group, Bratislava

#### NUCLEAR ENERGY AFTER FUKUSHIMA & MOCHOVCE 3,4 COMPLETION

Jozef Zlatňanský received a M.Sc. degree in electrical engineering in 1976 from Slovak Technical University, and completed nuclear engineering postgraduate study in 1982, defended thesis on VVER 230 power up-rate. He started he professional carrier as a designer for changes in NPPs. From 1993 to 2000 he was the Vice-Chairman of the Slovak Nuclear Regulatory Authority and alternate to the IAEA Board of Governors (1994–1996). He has been extensively involved in IAEA activities related to operational and regulatory aspects relevant to nuclear safety and participated in the IAEA safety review and regulatory experts review missions. He was appointed as a Chairman of Task Force (FORATOM) for New Builds. From 2000 till 2006 he served in International Atomic Energy Agency as an Acting Head of Europe Section and was assigned to assist the IAEA member states in Europe in nuclear energy and nuclear safety programs. In 2006 he created and started to manage Nuclear Oversight in SE as an independent nuclear safety review function. He is also active internationally as an Executive Vice-President of Slovak Nuclear Forum, member of ENDESA Safety Board and member of ENISS Steering Committee.



Karl GÖTZ Head of Department Risk Management, TÜV SÜD Industrie Service GmbH, Munich

#### NPP STRESS TEST IN GERMANY

Karl Götz has a Diploma in Mechanical Engineering from the Technical University of Munich and works for TÜV SÜD since more than twenty years. He is a qualified and experienced engineer with extensive technical experience at various nuclear licensed sites, skilled in the use of software tools for safety and reliability analysis and familiar with all questions of supervision and licensing of NPPs. In the non nuclear area he is an expert for Risk Management and Reliability Engineering covering all aspects of system safety and reliability, technical and fi nancial risks and question of logistics and human resources. He is experienced in industry sectors like airplanes, rail, distribution systems, chemical industry, container ports and logistics.



#### Ladislav NOVÝ Deputy Director, Nuclear Power, ZAT jsc., Příbram

#### ZAT CONTROL SYSTEMS FOR APPLICATION IN NUCLEAR POWER

Ladislav Nový graduated in 1983 in Power Engineering from the Faculty of Electrical Engineering, the Institute of Technology in Pilsen (later University of West Bohemia). He started his professional carrier as gas turbine control system designer in Škoda Works (1983), further he worked in Škoda Controls as a designer responsible for the VVER type nuclear reactor regulation mechanism control system designs, and head of the Nuclear Energy Designs Department. From the 2003 he is with ZAT, jsc., as Deputy Head of the Project Management Department and till now as Deputy Head of the Nuclear Energy Division. Currently he is focusing on developing ZAT's own control systems for nuclear power, and managing related HW design, design of the system and implementation SW. He is also co-author of the control systems design for regulation mechanism of VVER 440 and VVER 1000 reactors (RRCS, SGIU-M), currently installed in six VVER 440 units and eleven VVER 1000 units.



referát predniesol Zdeněk Sutnar



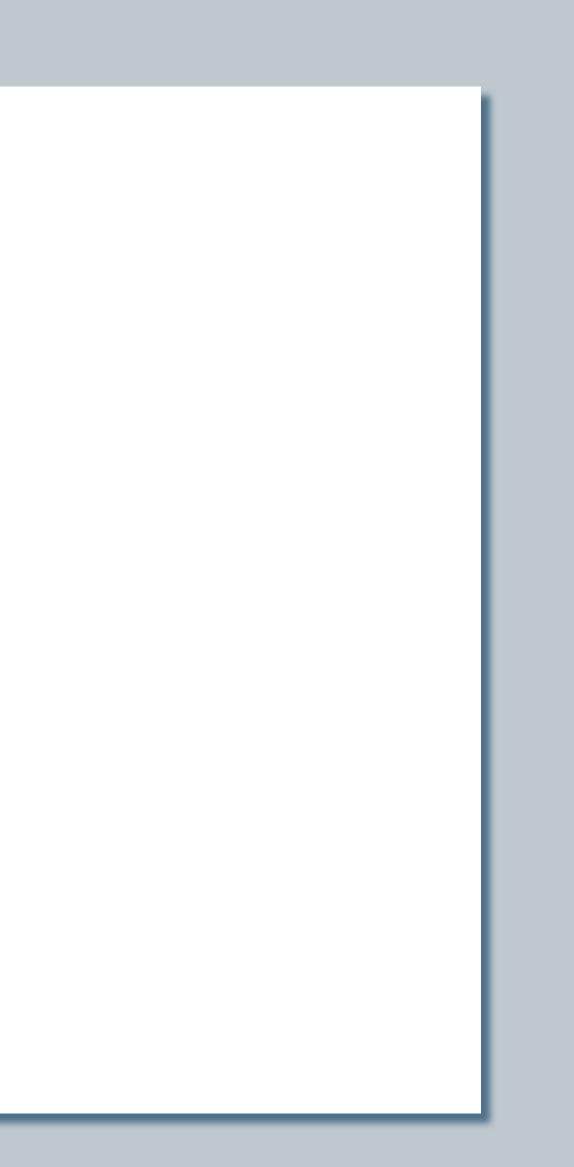
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#### Zámocká Street Pálffy Palace

Then we are talking about Zámocká Street, we shouldn't forget that up to now there is a torso of the Pálffy Palace summer wing still having significant artistic, historical and archi-tectonical values.

According to available historical sources the Pálffy Palace in the extramural settlement was built in time of Bratislava castle reconstruction, which was decided on the basis of a special act in 1635 by the Ugrian Concilium. This enables to Pavol Pálffy, a leader of the castle reconstruction, to build a large palace on the so called Schlosgrund. In order to assure a better building material supply to the building site, he opened a service road, which became later Zámocká Street. This street was then settled by Jewish settlers coming to the town from former manors of Mikuláš Pálffy.

In 1870 the town based on the deed of donation became the owner of the Palace and built up here artillery casern, orphanage and social flats for poor people. After 1900 the Palace complex was gradually cleansed and on its place a college on Svoradova Street and a contemporary primary school Palisády were built. In 1985 the preserved part of the Palace – the summer wing – was placed on the register of listed buildings.

(Young Wolfgang Amadeus Mozart during his visit of Bratislava had a concert exactly in Pálffy Palace under the castle hill and not at Ventúrska Street, like a memorial plaque is incorrectly informing.)

source: http://www.bratislavskenoviny.sk/12879/obnova-mesta/podari-sa-zachranit-torzo-palffyho-palacaa





