

TECHNICAL PAPER SESSIONS (TPS)

Tu, June 14: 17:00 – 18:30
We, June 15: 8:30 – 10:00

TPS 1

Conference Hall: MUNTENIA

TPS 1.1 / TPS 1.2

STRATEGIC DIRECTIONS IN THE TRANSITION OF THE ENERGY SECTOR IN THE DIGITAL ERA

TERMS OF REFERENCE

- Decarbonization of the energy sector – a central element of the green transition
- Regular updating of National Energy and Climate Plans (PNIESC)
- Zero emission vehicles
- Review the EU Emissions Trading System
- Digitization of electricity and gas transmission and distribution systems
- Gradual reduction versus phasing-out of coal use

Co-organizer

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Responsible: Alexandru PĂTRUȚI

➤ Committee of the session:

• Chair:	Anca POPESCU	ISPE Proiectare și Consultanță	Expert Consultant
• Moderator:	Alexandru PĂTRUȚI	WEC / RNC	Councillor
• Reporter:	Marian DOBRIN	ISPE Proiectare și Consultanță	Director

➤ Paper presentations:

Paper ID	Title of paper	Authors	Company
TP 1-1	ELECTRICITY TRANSITION – CHALLENGES AND EXPECTATION	Ciprian Diaconu	Transelectrica
TP 1-2	SUSTAINABLE ENERGY TRANSITION ROADMAP TO 2050 FOR REPUBLIC OF MOLDOVA	Cristina EFREMOV Mihai CERNEI Vasile LEU	Technical University of Moldova,
TP 1-3	IDENTIFYING MEDIUM AND LONG-TERM SOLUTIONS TO COVER ELECTRICITY DEMAND OF THE REPUBLIC OF MOLDOVA	Ion COMENDANT Mihai TÎRȘU	Institutul de Energetică din R. Moldova
TP 1-4	THE INFLUENCE OF THE RUSSIAN MILITARY INVASION OF UKRAINE ON THE ENERGY INDEPENDENCE OF EUROPEAN COUNTRIES	Michael ZGUROVSKY Maryna KRAVCHENKO Ionuț PURICA	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
TP 1-5	DIGITALIZATION FOR OCCUPATIONAL SAFETY AND HEALTH – NEW AND EMERGING CHALLENGES FOR „CNTEE TRANSELECTRICA SA” PERSONNEL FOR REDUCING PROFESSIONAL RISKS	Alice RĂDUCANU	UNO – DEN, CNTEE Transelectrica SA
TP 1-6	ANALYSIS OF THE TECHNICAL CONDITION OF THE TRANSFORMERS IN THE ELECTRIC TRANSMISSION NETWORK	Remus DINCULESCU Claudia CANDALE Traian CHIULAN Bogdan LEU	TRANSELECTRICA
TP 1-7	DEVELOPMENT OF A DISTRIBUTED FLEXIBILITY SERVICES MARKET TO BE OPERATED BY A ROMANIAN DISTRIBUTION SYSTEM OPERATOR	Georgiana Toma Alexandru Petrut Alexandru Valeriu Binig	ENEL
TP 1-8	CLEAN ENERGY AND RESILIENCY CONCEPTS AND ITS APPLICATION IN WEDISTRICT PROJECT	Mihai SÂNDULEAC Constantin IONESCU Cătălin DAMIAN Cristina EFREMOV Teodor DIACONU	UPB
TP 1-9	BLOCKCHAIN REAL TIME DATA ACQUISITION FROM PHOTOVOLTAIC PANELS	Alin Nicolae CORBU George CALIANU Mihail Eugen RESTEANU Ionel CALCAN Maria Simona RABOACA	ICSI Vâlcea

Tu 14 June: 17:00 – 18:30
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TPS 2

Conference Hall: ROMANIA

TPS 2.1 / TPS 2.2 NEW TECHNOLOGIES IN THE ENERGY SECTOR: STORAGE, HYDROGEN, ENERGY EFFICIENCY, POWER QUALITY

TERMS OF REFERENCE

- Advanced solution for flexibility enhancement
- Hydrogen technology
- Advanced energy storage solutions
- Intelligent solutions for energy efficiency improvement
- Energy technologies to support zero carbon future
- Electric Vehicles and e-Mobility
- Digitalisation and Blockchain to unlock sustainability

Co-organizer -

Responsible: Radu PORUMB & Călin VILT

➤ Committee of the session:

•Chair:	Nicolae GOLOVANOV	CNR – CME	Professor
• Moderator:	Radu PORUMB Călin VILT	University POLITEHNICA of Bucharest RNC WEC	Professor Councillor
• Reporter:	Mădălina ARHIP	University POLITEHNICA of Bucharest	Assistent

Paper ID	Title of paper	Authors	Company
TP 2-1	CURRENT HYBRID SYSTEMS OF PRODUCING ELECTRIC AND THERMAL ENERGY	Teodor POP Radu-Dumitru PENTIUC Laurențiu-Dan MILICI Cezar-Dumitru POPA Constantin UNGUREANU Dumitru CERNUȘCĂ	Faculty of Electrical Engineering and Computer Science, University "Ștefan cel Mare" of Suceava,
TP 2-2	ANALYSIS OF THE OPERATION OF SOLAR MICRO-INVERTERS	Dumitru CERNUȘCĂ Constantin UNGUREANU Radu-Dumitru PENTIUC Eugen HOPULELE Teodor POP	Ștefan cel Mare University of Suceava,
TP 2-3	INTEGRATED INFORMATIC SYSTEM STRUCTURE FOR DIGITAL MONITORING OF THE CO2 STORAGE	Gabriel VLADUT	IPA SA
TP 2-4	"DIGITEL SMART VISION" PILOT PROJECT	Bogdan LEU Cătălin LIȘMAN Mihai MARCOLȚ Alexandru LUCA Claudia CANDALE	CNTEE Transelectrica SA
TP 2-5	A NEW INSTRUMENT APPROACH FOR LOAD FLEXIBILIZATION OF THERMAL POWER PLANTS	Stefan KRANZ	KROHNE Group
TP 2-6	ADVANCED PROTECTION SYSTEMS PROVIDED BY THE USE OF WAMS	Iulia-Cristina CONSTANTIN Ionela-Marilena IONESCU	TRANSELECTRICA
TP 2-7	PILOT PROJECT – UPGRADING THE SYNCHRONISED MEASUREMENT SYSTEM INSTALLED IN ROMANIAN POWER SYSTEM	Anamaria IAMANDI Florin - Grigore BĂLAȘIU	TRANSELECTRICA
TP 2-8	TELEPROTECTIONS IN NPS. FUNCTIONS AND PARAMETERIZATION	Valentin VILCU	TRANSELECTRICA
TP 2-9	STEADY STATE OF HYBRID AC-DC MICROGRIDS	Alisa Fleancu Teodora Mindra	National Power Dispatcher (DEM), CNTEE Transelectrica SA
TP 2-10	USE OF DEDICATED SOFTWARE TO IMPROVE THE ENERGY EFFICIENCY OF CENTRIFUGAL PUMPS DRIVE INDUCTION MOTORS IN POWER PLANTS	Silvia-Maria DIGĂ Paul-Mihai MIRCEA Nicolae DIGĂ Gabriel-Cosmin BUZATU	Prof., Dept. of Electrical, Energetic and Aerospace Engineering, University of Craiova
TP 2-11	REGARDING THE VALUES MODIFICATION OF THE DEPRECIATION FACTOR IN PHOTOMETRIC CALCULATIONS OF THE LIGHTING SYSTEMS	Nicolae MOGOREANU Nicolae GOLOVANOV Victor GROPA	Technical University of Moldova, Dept. of Power Engineering

TP 2-12	THE HYDROGEN ROLE IN THE TRANSITION TOWARDS 100% ENERGY FROM RENEWABLE SOURCES	Dumitru BRAGA	Technical University of Moldova
TP 2-13	RES SUSTAINABLE SOLUTIONS TO IMPROVE THE ENERGY PERFORMANCE OF EXISTING OR NEW DHSS	Daniela Burnete Marian Dobrin Lidia Mitroi Ileana Constantinescu Adriana Milandru	ISPE
TP 2-14	HYDRA – CHALLENGES AND OPPORTUNITIES IN DEVELOPING, SUSTAINABLE, NEXT-GENERATION BATTERY MATERIALS IN EUROPE	Mihaela Buga Cosmin Ungurean Alin Chitu Alexandru Rizoiu Adnana Spinu-Zaulet Simon Clark	ICSI Vâlcea

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TPS 3

Conference Hall: BANAT

TPS 3.1 / TPS 3.2 ENERGY RESOURCES USED IN THE REGION: OIL, NATURAL GAS, COAL, NUCLEAR

TERMS OF REFERENCE

- Resources and new exploration perimeters, onshore and offshore
- Natural gas: essential fuel during the transition period
- Modern technologies and equipment for upstream, mid-range and downstream operations in the oil and gas industry
- Transport, storage and distribution of gas, oil and petroleum products
- Digitization and smart grids
- Environmental impact and decarbonisation in the mining, oil and gas industries
- Clean technologies in the coal industry
- Flexible nuclear reactors
- Nuclear waste management

Co-organizer -

Responsible: Niculae ANTONESCU & Ionuț PURICA

➤ Committee of the session:

• Chair:	Niculae Napoleon ANTONESCU	RNC WEC	Professor
• Moderator:	Ionuț PURICA	RNC WEC	
• Reporter:	Ionuț PREDOIU	University of Petroșani	

➤ Presentations of the papers:

Paper ID	Title of paper	Authors	Company
TP 3-1	ENGINEERING CHALLENGES TO IMPROVE NUCLEAR SAFETY FOR PHWR PLANT BY ADAPTING A PATENTED PASSIVE SAFETY SYSTEM FOR THE ALFRED DEMONSTRATION REACTOR	Iulian NITA Rodica PANCEF	CITON
TP 3-2	ON THE GEO-TECHNOLOGICAL AND STRATEGIC SECURITY OF THE EXPLOITATION OF ENERGO - MINERAL RESOURCES IN ROMANIA: THE CASE OF OFFSHORE DEPOSITS	Ioan GĂF-DEAC Sorin Mihai RADU Ioan-Petru SCUTELNICU	University of Petroșani
TP 3-3	DEVELOPEMENT AND CHARACTERIZATION OF CHROMIUM COATING DEPOSITED ON ZIRCALOY-4 SUBSTRATE	Diana DINIAȘI Alexandru ANGHEL Valentina ROȘU Vlăduț ION Aurel DAVID	Institute for Nuclear Research, Pitesti
TP 3-4	ENERGY RECOVERY FROM WASTE HEAT IN NATURAL GAS COMPRESSION ACTIVITY BY USING ORGANIC RANKINE CYCLE TECHNOLOGY	Argentina TĂTARU Traian Lucian OLAR Sándor BOLÁZS	ROMGAZ
TP 3-5	THE HYDROCARBONS DISPLACEMENT BY WATER IN A NON-UNIFORM RESERVOIR	VLĂȘCEANU Costin Viorel STAN Marius	UPG Ploiești
TP 3-6	THE ROLE OF NATURAL GAS IN THE ENERGY TRANSITION	Ion FOIDAȘ Diana Andreea LUPU Vasile Cosmin TRIF	ROMGAZ
TP 3-7	THE ROLE OF THE UNDERGROUND STORAGE IN ENSURING NATIONAL ENERGY SECURITY	Marius NENIȘANU Horia NENIȘANU	ROMGAZ
TP 3-8	THERMAL SIMULATION ANALYSIS FOR DRILLING AND PRODUCTION OPERATIONS OF THE FIRST OFFSHORE WELL IN LEBANON	Ayham MAHNNA Mohamed HALAFAWI Lazăr AVRAM	UPG Ploiești
TP 3-9	UNCONVENTIONAL RESERVES: A CIRCUMSTANCE CHANCE FOR INCREASING THE ENERGY SECURITY OF ROMANIA AND THE OPPORTUNITY TO GET OUT OF THE ENERGY CRISIS IN THE GLOBAL CONTEXT	Valentin-Paul TUDORACHE Niculae-Napoleon ANTONESCU	UPG Ploiești
TP 3-10	FLEXIBLE NUCLEAR REACTORS, A PATH TO ENERGY RESILIENCE	Cristina-Elena LASCU	CNR - CME
TP 3-11	IMPORTANTA MENTINERII PRODUCTIEI DE LIGNIT DIN OLTENIA IN GENERAREA DE ENERGIE ELECTRICA A ROMANIEI	Ionuț PREDOIU	
TP 3-12	ROMANIA'S ON SHORE GAS FIELDS DEVELOPMENTS. PROSPECTIVE AREAS AND DRILLING CONDITIONS	Lazar AVRAM Mihail-Valentin BATISTATU	UPG Ploiești

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TPS 4

Conference Hall: MARAMURES

TPS 4.1 / TPS 4.2 ENERGY MARKET: LIBERALIZATION, EUROPEAN INTEGRATED MARKET, IMPACT OF RES, CENTRAL CUSTOMER

TERMS OF REFERENCE

- Potential of the renewable energy market
- Cost of renewable energy
- Modern energy storage systems on the energy market
- Participation of energy communities in the energy market
- Influence on the energy market of active energy sources (prosumers)
- Contribution of the energy market to the de-carbonation of the energy system
- Development of forward markets
- Price formation on the electricity and natural gas market
- Presence of vulnerable users in the energy market

Co-organizer -

Responsible: Nicolae GOLOVANOV

➤ Committee of the session:

• Chair:	Cristina ȘETLAN	OPCOM	Director
• Moderator:	George Cristian LĂZĂROIU	University POLITEHNICA of Bucharest	Profesor
• Reporter:	Georgiana BALABAN	University POLITEHNICA of Bucharest	Dr Eng

➤ Presentations of the papers:

Paper ID	Title of paper	Authors	Company
TP 4-1	ELEMENTS OF DEMOCRATIZATION OF ENERGY MARKETS, PRESENT AND PERSPECTIVES	Florin RADOI Carmen STANESCU Dorel STANESCU	TRANSELECTRICA
TP 4-2	PRETURI IN PIETE. CAUZE SI SOLUTII	Ionel ILIE	CE Oltenia
TP 4-3	THE IMPACT OF DISPERSED GENERATION ON DISTRIBUTION NETWORK	Silvia VLĂSCĂANU Radu Cristian OPREANU	HENRO
TP 4-4	SOME CONSIDERATIONS ON THE CURRENT OPTIONS TO IMPLEMENT SMALL MODULAR REACTORS IN ROMANIA, CONSIDERING THE CONTEXT OF ENERGY MARKET AND CLIMATE POLICIES	Marin CONSTANTIN Ilie TURCU Constantin PAUNOIU Daniela DIACONU Minodora APOSTOL Mirela NITOI Daniela GUGIU	RATEN ICN, Institute for Nuclear Research
TP 4-5	FARACROSS PROJECT: INTRODUCTION TO DEVELOPING THE CO-OPTIMIZED MARKET DESIGN FOR ENERGY-RESERVE AUCTIONS OF CROSS-ZONAL CAPACITY WITH RESERVE CAPACITY	Silvia – Carmen VASILE Ramona – Beatrice BUDAI – BUNCEANU	TRANSELECTRICA
TP 4-6	ALLEVIATING ENERGY POVERTY THROUGH INNOVATIVE SCHEMES AND MEASURES	Camelia Vasile, Daniela Burnete, Ion Chitescu, Adriana Milandru, Anca Popescu	ISPE
TP 4-7	P2G2P SYSTEM - CASE STUDY FOR A 5 MW PHOTOVOLTAIC PARK	Mihai CULCER Mariana ILIESCU Maria- Simona RABOACA Adrian ENACHE Elena CARCADEA	ICSI Vâlcea
TP 4-8	EVALUATION OF THE OPTIMAL SOLAR FRACTION FOR A DISTRICT HEATING SYSTEM	Arion V. Hlusuov V. Sanduleac M. Leu V. Borosan C.	Universitatea tehnica Moldovei
TP 4-9	AN ANALYSIS OF THE TECHNICAL CONFORMITY CERTIFICATION PROCESS FOR SYNCHRONOUS GENERATORS UP TO 5 MW	Gabriel GHEORGHE Daniel CRĂCIUN	DEER
TP 4-10	FUNCTIONAREA CENTRALELOR CEO IN CONDITIILE MODIFICARII REGULAMENTELOR PENTRU SERVICII DE SISTEM	Marius BAZGA	CE Oltenia
TP 4-11	INTEGRATION OF SOLAR RENEWABLE ENERGY SOURCES IN CENTRALIZED THERMAL ENERGY SUPPLY SYSTEMS	Cristian GHEORGHIU Gabriela SAVA Eduard MINCIUC	UPB

From Monday 13 June
To
Wednesday 15 June

POSTER SESSION

EXPO AREA

➤ Presentation of the posters

Poster ID	Title of poster	Authors	Company
PS 1	FATIGUE STATE EVALUATION OF THE FUEL CHANNEL AFTER 40 YEARS OF OPERATION	Jean MATEI	RATEN CITON
PS 2	IMPACT OF PERMEATION BARRIERS FOR TRITIUM ON INCREASING RADIOLOGICAL SAFETY IN RADIOACTIVE WASTE DISPOSAL FACILITIES	Hortensia BEZNILĂ Adriana OLTEANU Ion STĂNICĂ	RATEN CITON
PS 3	CHALLENGES AND PROBLEMS RELATED TO DEVELOPMENT OF KNOWLEDGE AND COMPETENCIES FOR DEEP GEOLOGICAL REPOSITORY OF RADIOACTIVE WAST	Mihaela FILIP Raluca FAKO Rodica NICOLAE	RATEN CITON
PS 4	PRESENTATION OF THE CONCEPTUAL MODEL OF ALFRED STEAM GENERATOR	Dragoș PALAȘ	RATEN CITON
PS 5	ASPECTS REGARDING C&I SYSTEMS TECHNOLOGIES OF SMRs	Răzvan POPOVICI Magdalena VLAD Florin VACARIU Emiliana TRIFAN Bogdan BLĂNARU	RATEN CITON
PS 6	ASPECTS RELATED TO THE REDUCTION OF GREENHOUSE GAS EMISSION THROUGH THE USE OF MIXED ELECTRICITY SUPPLY SYSTEMS	Emiliana-Ioana TRIFAN Magdalena VLAD Răzvan POPOVICI Florin VACARIU Adrian SABIE Bogdan BLĂNARU	RATEN CITON
PS 7	ISSUES REGARDING PHYSICAL PARAMETERS MONITORING IN DEEP UNDERGROUND RADIOACTIVE WASTE REPOSITORIES	Florin George VACARIU	RATEN CITON
PS 8	HUMAN FACTOR BASED-APPROACH OF THE IN THE DESIGN OF HUMAN-SYSTEM INTERFACES OF GEN IV NPP	Magdalena VLAD Răzvan POPOVICI Florin VACARIU Emiliana TRIFAN Bogdan BLĂNARU	RATEN CITON
PS 9	EXPERIMENTAL STUDY OF THE BEHAVIOR AT POWER ARC TEST OF COMPOSITE INSULATORS	Cristian SĂLCEANU Marcel NICOLA Daniel OCOLEANU Cătălin DOBREA Mihai IONESCU Daniela IOVAN	National Institute for Research, Development and Testing in Electrical Engineering – ICMET Craiova
PS 10	UPGRADING A DYNAMIC BRAKING SYSTEM FOR ASYNCHRONOUS POWER INDUCTION MOTORS WITH WIREWOUND ROTOR, USING A PHOTOVOLTAIC PANEL SYSTEM	Daniel Constantin OCOLEANU Marcel NICOLA Cristian SĂLCEANU Cătălin DOBREA Mihai IONESCU Daniela IOVAN	National Institute for Research, Development and Testing in Electrical Engineering – ICMET Craiova
PS 11	STUDY ON A PROCESS OF REMOVING MOISTURE, FROM THE POWER TRANSFORMERS INSULATION, BASED ON ZEOLITE MOLECULAR SIEVES	Ancuța-Mihaela ACIU Maria-Cristina NIȚU	National Institute for Research, Development and Testing in Electrical Engineering – ICMET Craiova
PS 12	INTEGRATION OF HYBRID PHOTOVOLTAIC THERMAL PANELS INTO A DISTRICT HEATING SUBSTATION	Diana TUTICA Mihaela NORISOR Roxana PATRASCU Eduard MINCIUC	University POLITEHNICA of Bucharest
PS 13	AN OVERVIEW OF BLACK SEA (ROMANIAN SECTOR) PETROLEUM SYSTEMS AND THEIR PROGNOSIS RESOURCES	Mihail-Valentin BATISTATU Lazar AVRAM	UPG Ploiești
PS 14	WATER COLUMN CHARACTERISATION AND PHYSIOCHEMICAL ANALYSES FOR MARINE ENVIRONMENT OF THE PRELIMINARY DRILLING ACTIVITIES LOCATION IN LEBANON	Ayham MAHNNA Mohamed HALAFAWI Fadhil ABDULHUSSEIN Lazăr AVRAM	UPG Ploiești
PS 15	ON THE DURABILITY OF PROGRESSIVE CAVITIES PUMPS	STAN Marius VLĂȘCEANU Costin Viorel	UPG Ploiești
PS 16	PRELIMINARY RESULTS ON THE SYNTHESIS OF NASICON Na ₃ Zr ₂ Si ₂ PO ₁₂ FOR OPTIMIZED IONIC CONDUCTIVITY	Simona Elena BORTA Mihaela IORDACHE Elena MARIN Adriana Teodora MARINOIU	ICSI Vâlcea
PS 17	CATALYSTS DEPOSITION FOR MEA FABRICATION	Simona BORTA Claudia SISU Irina PETREANU Adriana MARINOIU	ICSI Valcea
PS 18	C-COATED SiO ₂ MATERIALS AS HIGH-PERFORMANCE LITHIUM-ION BATTERY ANODES	Cosmin Ungureanu Adnana SPINU--ZAULET Alin CHITU Raul-Augustin MITRAN Eugeniu VASILE Mihaela BUGA	ICSI Vâlcea

PS 19	DEVELOPMENT OF SUSTAINABLE CO2 CONVERSION PROCESS FOR THE METHANOL PRODUCTION USING Cu/ZnO/Al2O3 CATALYST	Elena MARIN Anisoara OUBRAHAM Simona BORTA Adriana MARINOIU	ICSI Vâlcea
PS 20	FABRICATION OF MEMBRANE ELECTRODE ASSEMBLY (MEA) FOR PEMFC	Elena MARIN Sorin SORLEI Catalin CAPRIS Adriana MARINOIU	ICSI Valcea
PS 21	GREEN HYDROGEN USED FOR A SMALL COMMUNITY. CASE STUDY	Alin Nicolae CORBU Maria Simona RABOACA Andreea-Raluca FELSEGI	ICSI Valcea
PS 22	DYNAMIC DATASET GENERATION OF EV CHARGING NETWORKS FOR REINFORCEMENT LEARNING ALGORITHMS	Maria Simona RABOACA Andrei ROBU Andrei VIZITEU Daniel FURTUNA Stelian SENOCICO Andrei TRACIU	ICSI Valcea
PS 23	ENABLING P2P EV CHARGING	Maria Simona RABOACA Alexandru CREANGA Adrian ONU Catalin TURFIN Daniel FURTUNA Selian SENOCICO Andrei TRACIU	ICSI Valcea
PS 24	AGRIVOLTAICS POTENTIAL IN ROMANIA – A SYMBIOSIS BETWEEN AGRICULTURE AND ENERGY	Cristian GHEORGHIU Mircea SCRIPCARIU Gabriela SAVA Miruna GHEORGHIU Alexandra-Lidia DINA	UPB