

6th Session CG KO CIGRE – preferential topics

Group A1 - rotating electrical machines

1. Rotating electrical machines and renewable energy sources
2. Transients in rotating electrical machines
3. Isolation systems of rotating electrical machines - experience from practice
4. Optimizing electrical drives
5. Regulation of the voltage and power of synchronous machines

Group A2 – Transformers

1. Maintenance of transformers in the field, their preventive control and revitalization
2. Estimation of lifetime of energy and measuring transformers and proposal of measures for further exploitation
3. New test methods, applied technologies and monitoring

Group A3 - High voltage equipment

1. Problems with the use of high voltage equipment
2. Maintenance and repair of high voltage equipment
3. New test methods, technology and monitoring

Group B1 – Cables

1. Laying of cables and cable accessories
2. Exploitation of cable
3. Cable Network
4. Regulation for cable and cable accessories

Group B2 – Overhead lines

1. Corridors of OHL and Legal Regulations in Our Country
2. Harmonization of Regulations for the Construction of OHL in Accordance with New Practice in Our Country
3. Action and Procedures During the Construction of OHL in the Light of New Legislation
4. Experiences Leading to Improvements of OHL
5. Technical and Environmental Aspects of OHL

Group B3 – plants

1. Implementation of new technical solutions and technologies in switchyards and substations
2. Experience from reconstruction, modernization and maintenance in switchyards and substations
3. Impact of the transmission and distribution network on substations concept
4. Optimization of electric power proper consumption in power plants
5. Reconstruction and modernization, overhaul and analysis of transient regimes in hydro power plants
6. The impact of facility on the environment

Group B4 - high voltage one-way (HVDC) systems and Power Electronics

1. HVDC systems and their components (performance, control, reliability, maintenance, environmental impact, ...)

2. Power electronics in transmission systems (FACTS and other devices)
3. Power electronics application in renewable energy systems
4. Electromagnetic compatibility of power electronics
5. Advanced control methods for power converters and electrical drives

Group B5 - Protection and Automation

1. Modern solutions for protection system in hydro power plants, thermal power plants, high-voltage and medium-voltage facilities
2. Modern solutions for automation in hydro power plants, thermal power plants, high-voltage and medium-voltage facilities
3. Joint control and optimization of the operation of hydroelectric power plants
4. Problems of security, due to increased levels of automation
5. Standardization of labeling system
6. Application of various communication protocols in automated systems
7. Protection and automation for small and mini hydro power plants
8. Specifics of facilities that are without crew
9. Protection and automation at wind power plants
10. Social aspects of automation

Group C1 - Development and EEC economy

1. Strategies of system development and capital investments – impact of social factors and uncertainty in selection of strategic goals and investments
2. State of the art approaches and standardization in asset management decision making
3. Coordinated planning between grid operators across all voltage levels
4. Improvement of planning methods by taking into account of smart grids, distributed generation and demand side management

Group C2 - the exploitation and management of EES

1. New concepts of system observability, controllability and flexibility
2. New solutions for provision of ancillary services: frequency and voltage control
3. Wide area control
4. Disturbance management and restoration strategies, including cross border approach
5. Coordination TSOs/DSOs/Grid User (renewable generation, distributed generation, and demand) in managing disturbances

Group C3 - System Environmental Performance

1. Public acceptance of electric power facilities, practical experiences and recommendations
2. Impact of electric power facilities on the environment during construction and operation of facilities
3. Measures for prevention, reduction and mitigation of impact of electric power facilities
4. Waste management in electric power facilities
5. Standardisation in the field of environmental protection and occupational safety

Group C4 - Technical performance of power systems

1. Power quality
2. Overvoltages and insulation coordination
3. Modelling of power system performances
4. Influence of electromagnetic fields of low frequencies and electromagnetic compatibility

Group C5 - electricity markets and deregulation

1. Position of the state energy company as a supplier / producer in the conditions of a deregulated market
2. Possibilities of buyers of electricity in the liberalized market
3. Regulation of congestions in Montenegro in coordination with auctions at the regional level
4. Barriers vs. support mechanisms for RES
5. Justification of the implementation of batteries project in the Energy System of Montenegro
6. Analysis of the impact of the implementation of the CO2 emissions tax in Montenegro
7. The influence of other markets (gas, coal, oil ...) on the electricity market

Group C6 - Distribution Systems and decentralized production

1. Planning, maintenance and operation of distribution and transmission grid
2. Decentralized production of electrical energy from RES
3. Grid connection issue for RES
4. Smart grid
5. Transmission and distribution system automation
6. Advanced metering systems

Group D2 - Information Systems and Telecommunications

1. Development and modernization of SCADA system (new modules, functionality, tools, architecture) in accordance with new needs and development of hardware and software technologies
2. Integration of local and remote control functions in automation systems for transmission and production plants
3. The connection of technical and business information systems
4. "Smart grid" systems from the aspect of IT and telecommunications
5. Information and communication technologies for connecting distributed energy sources (monitoring, management, security, use of existing standards, interoperability, "cybersecurity")