

## FIELDS OF ACTIVITY OF STUDY COMMITTEES

<b>A<sub>1</sub></b>	<b>Rotating Electrical Machines</b> Economics, design, construction, test, behaviour and materials for turbine generators, hydro-generators, non conventional machines and large motors.
<b>A<sub>2</sub></b>	<b>Transformers</b> Design, construction, manufacture and operation for all kinds of power transformers including industrial, DC converters and phase-shift transformers and for all types of reactors and transformer components (bushing, tap-changer...)
<b>A<sub>3</sub></b>	<b>High Voltage Equipment</b> Theory, design, construction and operation for all devices for switching, interrupting and limiting currents, surges arresters, capacitors, busbars and equipment insulators and instrument transformers.
<b>B<sub>1</sub></b>	<b>Insulated Cables</b> Theory, design, applications, manufacture, installation, testing, operation, maintenance and diagnostic techniques for land and submarine AC and DC insulated cables systems.
<b>B<sub>2</sub></b>	<b>Overhead lines</b> Design, study of electrical and mechanical characteristics and performance, route selection, construction, operation, service life, maintenance, refurbishment uprating and upgrading of overhead lines and their components including : conductors, earth wires, insulators, towers, foundation and earthing systems.
<b>B<sub>3</sub></b>	<b>Substations</b> Design, construction, maintenance and ongoing management of substations and electrical installations in power stations, excluding generators.
<b>B<sub>4</sub></b>	<b>HVDC and Power Electronics</b> Economics, application, planning aspects, design, protection, control, construction and testing of HVDC links and the associated equipment. Power Electronics for AC systems and Power Quality Improvement and Advanced Power Electronics.
<b>B<sub>5</sub></b>	<b>Protection and Automation</b> Principles, design, application and management of power system protection, substation control, automation, monitoring and recording – including associated internal and external communications, substation metering systems and interfacing for remote control and monitoring.
<b>C<sub>1</sub></b>	<b>System Development and Economics</b> Economics and system analysis methods for the development of power systems : methods and tools for static and dynamic analysis, planning issues and methods in various context, assets management strategies.
<b>C<sub>2</sub></b>	<b>System Operation and Control</b> Technical and human resource aspects of operation of power systems : methods and tools for frequency, voltage and equipment control, operational planning and real time security assessment, fault and restoration management, performance evaluation, control centre functionalities and operators training.
<b>C<sub>3</sub></b>	<b>System Environmental Performance</b> Identification and assessment of the impacts on environment of electric power systems and methods used for assessing and managing the environmental impact of system equipment.
<b>C<sub>4</sub></b>	<b>System Technical Performance</b> Methods and tools for power system analysis in the following fields: power quality performance, electromagnetic compatibility, lightning characteristics and system interaction, insulation coordination, analytical assessment of system security.
<b>C<sub>5</sub></b>	<b>Electricity Markets and Regulation</b> Analysis of different approaches in the organisation of the Electric Supply Industry : different market structures and products, related techniques and tools, regulations aspects.
<b>C<sub>6</sub></b>	<b>Distribution Systems and Dispersed Generation</b> Assessment of technical impact and requirements which new distribution features impose on the structure and operation of the system : widespread development of dispersed generation, application of energy storage devices, demand side management ; rural electrification.
<b>D<sub>1</sub></b>	<b>Materials and Emerging Test Techniques</b> Monitoring and evaluation of new and existing materials for electrotechnology, diagnostic techniques and related knowledge rules, and emerging test techniques with expected impact in medium to long term.
<b>D<sub>2</sub></b>	<b>Information Systems and Telecommunications</b> Principles, economics, design, engineering, performance, operation and maintenance of telecommunication and information networks and services for Electric Power Industry; monitoring of related technologies.