

## *Reshaping the Electric Power System Infrastructure*



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### **Preferential Subjects:**

#### **1 Structural change of existing equipment and infrastructure**

- a) Increased capacity by upgrading existing equipment and infrastructure.
- b) Standardization.
- c) Needs of new design of equipment and infrastructure.
- d) Technologies of end to end networks (LV to UHV) including micro-grids and super-grids.
- e) Optimal voltages of equipment for renewables.
- f) Decarbonisation of network equipment and infrastructure.

#### **2 New equipment and infrastructure**

- a) Interconnections between regions and countries.
- b) Generation, transmission, energy storage.
- c) Renewable energy, distribution.
- d) Use of Process Bus including Low Power Instrument Transformers and evolutions of Protection Automation and Control Systems.
- e) Environmental impact on future design (visual, audible noise, Electro Magnetic Compatibility, etc.)
- f) New materials for equipment (nano technology, High Temperature Superconducting, ceramic, etc.)

#### **3 Security of the network**

- a) Climate change impact on equipment and infrastructure (icing, fire, wind, floods, landslides, etc.)
- b) Physical security, safety
- c) Cyber security
- d) Solutions for protection in the low inertia grid
- e) Contribution of equipment and infrastructure to increase the grid resilience

