



CIGRE Technical Activities Strategic Directions 2010-2020

Abstracts

The important factors which shape the future of the Power Systems

- **The need to serve a growing demand for electricity:** New and more people connected; higher standards of living; new usages of electricity (transportation...); electricity will be the favoured form of energy.
- **The climate change and the development of carbon free generation- renewable/nuclear:** Thousands/millions of small dispersed units, unpredictable and fluctuating, or large plants, fluctuating or with limited flexibility, remote from the load areas,
- **The dearth and cost of energy:** need to tap all sources, no spilling; storage capabilities; efficient use energy; interactive exchange between providers and users,
- **The acceptability of power infrastructures:** more environment friendly equipment; limit the extension of the system, use the full built-in capability of equipment and system..

CIGRE activities 2010-2020 will align with 4 Technical Directions

- **Prepare the Power System of the future:** This Power System will be able to wheel bulk power over long distances from remote non carbon sources ; it will interconnect tightly the sources, to compensate for the geographical/temporal variability or lack of flexibility of these sources, and interface the “microgrids” / “local energy networks” which embed intelligent loads, dispersed generation, storage...
It will rely on a number of new techniques, UHV, DC and Power Electronics and embark more intelligence.
- **Make the best use of the existing equipment and system:** Use better the full built-in capacity of the system, operate the system nearer to its limits; operate the assets up to the useful life end, assess their condition, maintain, refurbish, extend their lifespan, replace...
- **Preserve environment :** Develop environment friendly materials, less intrusive techniques (cables); use assets efficiently; reduce carbon footprint of electricity...
- **Develop technical information :** Technical expertise, cooperation of worldwide experts and access to information are keys for the success of this evolution.