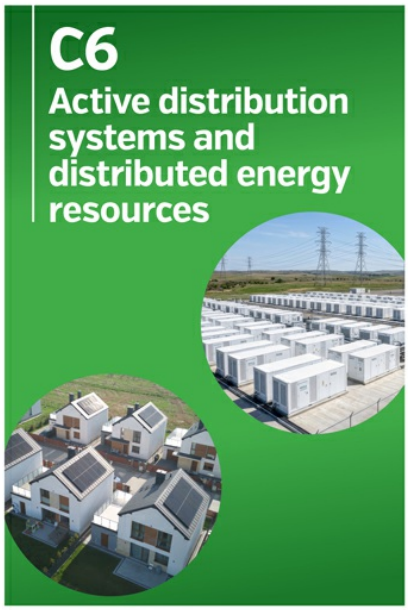
C6 - Active distribution systems and distributed energy resources



Mission

Assessment of the technical impacts resulting from a more widespread adoption of DER applications on planning and operation and on approaches, and of enabling technologies and innovative solutions for DER integration in active distribution systems.

Within this framework additional specific areas of attention include:

- Enabling technologies for renewable and distributed energy resource integration and application: active network management, microgrids, virtual power plants, distribution management systems (DMS, ADMS, DERMS), DER monitoring and control, aggregation systems and platforms, block-chain applications.
- Innovative solutions for DER and distribution technology deployment: smart inverters and power electronic interfaces, interconnection and integration requirements, MV/LV DC supply systems, distribution system modernization.
- Storage technologies: deployment of various storage technologies such as electrochemical electric battery energy storage systems, flywheels, flow batteries, and new storage
- Multi-energy solutions (including thermal storage), Power2X applications (including power to heat, power to gas), electric vehicles.
- New approaches to configure new distribution systems for enhanced reliability and resilience: islandable grid connected microgrids, power exchange between microgrids.
- New approaches to determine the impact and plan and operate distribution systems in the context of a wide deployment of DER, including the analysis of hosting capacity and protection
- Consumer integration and empowerment: demand side integration and participation, demand response, load management, smart load, new customer sectors such as electric vehicles, smart home and smart meter applications with impact on distribution systems.
- Smart cities: integrated distribution system technologies, power, control, and information and communication technology deployment for flexibility, integration of multi-energy systems.

- Rural Electrification: islanded power systems and individual customer off-grid systems, new solutions, weak grid connected systems.

Working groups
View a list of CIGRE's current working groups including for C6 here.

Publications

View all publications for Study Committee C6 on eCIGRE

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