



Technical Brochures

Technical Brochures: an output of CIGRE's 16 Study Committees and their 250+ Working Groups

Technical Brochures (TBs) are globally diverse, comprehensive publications. Over 930 have been published to date, with around 40 new ones added each year.

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Technical Brochures cover the full spectrum of the end to end power system and are factually robust, each offers over 100 pages of in-depth technical expertise.

These are sought after as the preeminent technical reference publications for professionals around the world. Over 930 have been published, with around 40 new ones added each year.

Technical Brochures are the output of CIGRE's 16 Study Committees and their 250+ Working Groups. These Working Groups are made up from a diverse collection of technical experts from across the global CIGRE community.

Technical Brochures undergo a rigorous peer review process to ensure their accuracy and integrity. They represent unique tools for real world application and standardisation of methods.

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Recent examples of Technical Brochures from the global CIGRE knowledge development programme

TB932 Aggregation of Battery Energy Storage and Distributed Energy Resources.

This TB describes distributed BESS aggregation approaches, BESS operating constraints in terms of battery technology, weight, maintenance, and coordination with other controllers and much more.

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TB931 Technical requirements and field experiences with MV DC switching equipment.

This TB describes potential use cases and applications of MMDC in networks. Focus is given on projects with switching equipment involved and on the different switching equipment for DC networks.

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TB923 Optimal transmission and distribution investment decisions under increasing energy scenario uncertainty.

This TB investigates the integration of uncertainties into planning scenarios, focusing on the decision-making processes of Independent System Operators (ISOs), Transmission System Operators (TSOs), and Distribution System Operators (DSOs).

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TB914 Guidelines for SF6 end-of-life treatment of T&D equipment (>1 kV) in substations

This TB summarises the practices and informs the EoL procedure of handling electrical equipment containing SF6 and the SF6 itself. Every step of the process is explained in detail.

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TB911 Power system restoration accounting for a rapidly changing power system and generation mix

This TB looks at the utilisation of new and emerging technologies during system restoration. To enable system operators to continue executing a successful system restart in a rapidly changing generation mix.

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TB897 Carbon Pricing in Wholesale Electricity Markets

This Technical Brochure examines the results of a survey on carbon pricing and wholesale electricity markets developed by CIGRE Working Group C5.32.

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TB882 Closing the gap in understanding between stakeholders and electrical energy specialists

This TB is aimed at reducing the gap in understanding between energy personnel and their stakeholders. It draws on a selection of twenty case studies and provides a range of tools and examples.

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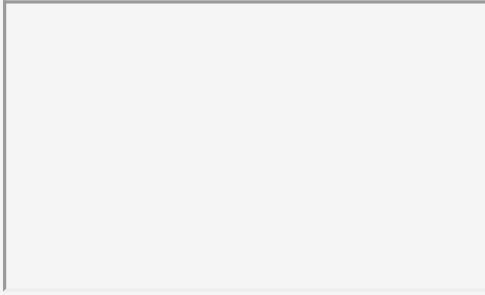
TB875 Medium Voltage DC Distribution systems

Embedded as part of distribution grids, MVDC systems are expected to facilitate a growing number of distributed renewable energy sources, which require power electronics interfaces, learn about this and much more in this in-depth publication.

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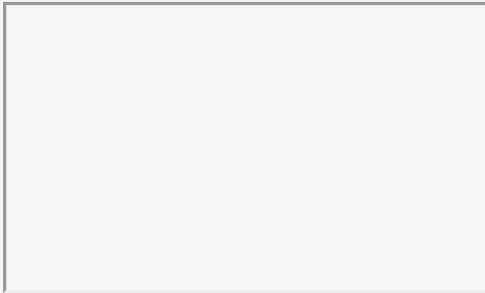
TB 874 Auction Markets and Other Procurement Mechanisms for Demand Response Services

Ensuring balance between generation and demand is challenging in power systems due to sudden load changes, forecasting errors and renewables. This in-depth TB explores the challenges and solutions you need.

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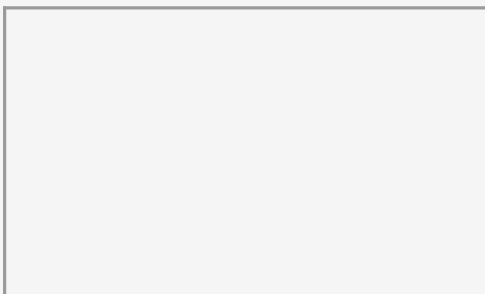
TB 851 Impact of high penetration of inverter-based generation on system inertia of networks

The worldwide drive to reduce carbon emissions has led to a global effort to accelerate the development and deployment of renewable energy sources. This TB explores key issues around inverter based generation and the impact on system inertia.

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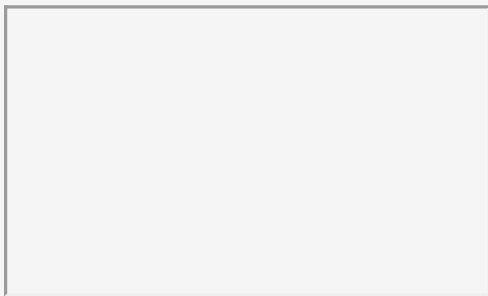
TB823 Substation servicing and supervision using mobile devices and smart sensing

The Technical Brochure analyses the way substation servicing and supervision is and will increasingly benefit from the use of smart and wireless sensing technologies and smart and wearable mobile devices.

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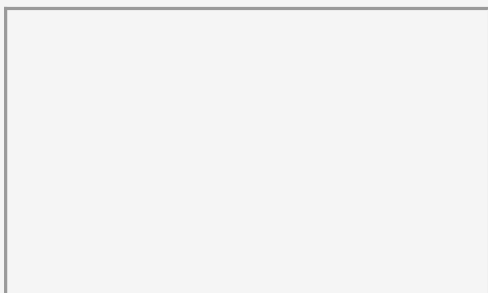
TB820 Optimal power system planning under growing uncertainty

This TB investigates the uncertainty factors existing in the power systems around the world and how they are considered in system planning. Best practices and lessons learned in planning under growing uncertainty are introduced.

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TB807 Application of robotics in substations

This TB provides an overview of the existing applications of robotics in substations for construction, inspection, maintenance, and operation. It also presents the current and expected future trends in the development of new robot systems, pointing to the need for further research and standardization.

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