

Special Issue

Protection of Future Multi-Terminal HVDC Grids

Message from the Guest Editor

Multi-Terminal HVDC (MT-HVDC) grids are expected to play a key role in future electricity delivery systems. The main drivers for the development of MT-HVDC grids are the large-scale integration of renewable energy resources, particularly off-shore wind farms, and the promotion of international energy markets through the concept of super-grids. The voltage source converter (VSC) technology, practically implemented as modular multilevel converters (MMCs) based on half-bridge or full bridge submodules, enables the realization of MT-HVDC grids by offering flexibility to change the power flow direction and the possibility of connecting to weak AC systems. This Special Issue covers both MT-HVDC grids comprising more than two terminals and meshed DC paths and MT-HVDC systems comprising more than two terminals but no meshed DC paths. There are a few MMC based MT-HVDC systems in operation while the world's first large-scale MT-HVDC grid, the Zhangbei four-terminal HVDC grid in China, is expected to be operational in 2022.

Guest Editor

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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