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Ongoing processes of restructuring and regulation are taking place in the electricity sectors of all European countries. These processes are targeting towards more transparent competition in the generation and retail of electrical energy. The physical transmission and distribution of electricity is thereby considered to be a natural monopoly that is to be unbundled from generation and retail and which needs to be regulated. New performance based regulatory frameworks are discussed, such as price caps or revenue caps.

In order to avoid transmission and distribution companies reducing their costs at the expense of power quality, some type of quality regulation has to be put in place. In addition to the economical regulation, which aims at providing strong incentives for cost reduction and efficiency, the quality regulation must at least provide incentives for safeguarding minimum levels of power quality. More ideally, a regulatory framework shall create an environment where it becomes a natural ambition for transmission and distribution companies to provide their customers with an optimized mix of low price and high quality. As modern societies become more and more sensitive to power quality problems, some kind of PQ-regulation will become inevitable in the near future. Such regulation will not be possible without sound and transparent tools for monitoring and reporting the PQ levels. These levels are used not only for regulatory issues, but also for coordination between the manufacturers of electrical equipment, the customers and the transmission and distribution companies. This article shows methodologies for quantifying PQ-levels for a range of power quality problems.



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