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The paper summarizes the present state of discussions on power phenomena, power definitions and compensation in single-phase linear circuits. The main concepts developed over several decades on how various non-active powers in circuits with nonsinusoidal voltages and currents should be defined and compensated are presented along with a detailed discussion of these concepts. The paper presents also the concept of the single-phase load current decomposition into Currents' Physical Components (CPC) and its application for power definitions and compensation in such circuits.

The paper is not addressed to scientists and experts on powers, but rather to common electrical engineers that sometimes face power related problems in nonsinusoidal systems.



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