Power quality management in smart grid

Policies and ethics

Nowadays, power quality control equipment generally employs the voltage source converter or current source converter. The output of converters can be regulated to control the power quality according to the voltage or current reference. The control method of the converter has a significant impact on the effect on power quality control. There are a lot of literatures describing the control methods, which are hysteresis control, dead-beat control, model predictive control, proportional integral control, proportional resonant control, repetitive control, and nonlinear robust control.

It is noteworthy that a lot of literatures promote methods to improve the compensation performance. [44] presents a multi-PR current controller based on the circuit model, which simplifies the harmonic extraction unit. [45] describes a control method with decoupled fundamental component and harmonic component, resulting in dispensable unit for the harmonic voltage and current detection. Dividing frequency control proposed in [8] and [46] reduces the compensation error of the harmonic current"s amplitude and phase, which is suitable for multi-structure active power filters.

Email: energystorage2000@gmail.com
WhatsApp: 8613816583346