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Power quality improvement using dynamic voltage restorer under different voltage sag

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Abstract:

Power quality has become a noteworthy issue now a day to manage, in order maintain power quality of supplied power. Today's generation enormously relies on upon electrical energy for enhancing their way of life. Present day equipment like computers, electric engines and so on can't keep running without power. Keeping in mind the end goal to enhance the execution, the equipment and modern electronic devices demands quality supply. The power quality is influenced by different components of the electrical network. Control quality issues, for example, voltage and frequency variety, and harmonic contents influence the performance of electrical utility and reduce its life time. Such issue must be repaid to guarantee the quality supply.

Voltage sag/swell is one of the most frequently occurring power quality issues in transmission network. Such problem can bring about heavy flow of current reduces the device lifetime or damage the equipment or can cause over voltage influencing the protection level of the hardware. Numerous cutting edge custom devices are available so as to mitigate such issues. Among them, Dynamic Voltage Restorer (DVR) is proficient and cost effective. In this research work a multilevel DVR has proposed to optimize the issues of power transmission sag/swell power quality improvement.

Keywords:

Multicell Converter; Dynamic Voltage Restorer; Multilevel Power Converters; Power Quality; Voltage Sag.