

## **EUR24\_05 - Electrification and Immunity Against Voltage Dips: A Case Study**

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### **Abstract:**

In the pursuit of net-zero emissions from industrial processes, several strategies have been conceived and subsequently realized. Electrification of previously steam- or gas-driven equipment sits in the forefront as an option to not only mitigate emissions, but also to improve energy efficiency. This includes electrification of low-power auxiliary equipment to that of high-power, critical systems. On the other hand, voltage dip disturbances in the electrical supply can disrupt the operation of such recently-electrified equipment and consequently affect process availability. Hence, this paper studies the consequences of a voltage dip on electrified equipment and explains the requirements for possessing a restart philosophy for a plant. Finally, the brownfield evaluation of the restart philosophy for two plants and their ride-through behaviour during an actual dip event are presented as a study case.