# Software-Defined Networks in Utility Power Networks

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**Abstract :** Software-defined network (SDN) is a network architecture designed to control network using software application in a central manner. This ability enables remote control of the whole network regardless of the network technology. In fact, in this architecture network intelligence is separated from physical infrastructure, it means that required network components can be implemented virtually using software applications. Today, power networks are characterized by a high range of complexity with a large number of intelligent devices, processing both huge amounts of data and important information. Therefore, reliable and secure communication networks are required. SDNs are the best choice to meet this issue. In this paper, SDN networks capabilities and characteristics will be reviewed and different basic controllers will be compared. The importance of using SDNs to escalate efficiency and reliability in utility power networks is going to be discussed and the comparison between the SDN-based power networks and traditional networks will be explained.

**Keywords :** software-defined network, SDNs, utility network, open flow, communication, gas and electricity, controller

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