

Abstract

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MICRO GRID STUDIES DUE TO FAULT OCCURRENCE USING IMMUNITY TECHNIQUE

In this paper, micro grids resulted due to transient fault occurrence are studied utilizing Artificial Immunity System (AIS). Transient fault detection is analyzed, studied and protected using the concept of wide area measuring, protection and control (WAMPAC). WAMPAC gives the opportunity of having a wide information system and sending ed local information to remote locations. The existence of Phasor Measurement Unit (PMU) overcomes the problem of real time monitoring problem and it help to put a defiance strategy which is designed to answers the following inquiries: a- detecting abnormal condition, b- taking Special Protection Schemes (SPS) action, c- initiating SPS action, and d- taking SPS action in certain place. The technique is based on a technology called Artificial Immunity system (AIS). It is used as a predictor to decide if the system is stable not, and determines the main generating groups which can construct proper operating islands. The proposed system is applied on New England IEEE 39 – Bus system. The proposed defensive approach shows accepted results in mitigating the power system transient instabilities.