

## **POWER QUALITY IMPROVEMENT USING DYNAMIC VOLTAGE RESTORER-BASED ANFIS CONTROLLER**

*Vinodh K P R<sup>1</sup> & Dr. K Saravanan<sup>2</sup>*

<sup>1</sup>*Department of Electrical and Electronics Engineering, Dr. M.G.R Educational Research and Institute, Chennai, India*

<sup>2</sup>*Professor, Department of Electrical and Electronics Engineering, Dr. M.G.R Educational Research and Institute,  
Chennai, India*

### **ABSTRACT**

*Network power misfortune and influence quality crumbling are creating many issues, particularly for delicate purposes, for example, server farms, air terminals, medical care, banking, protection, and telecom. These issues should be settled through energy congruity inclusion and enhancement. Dynamic voltage restorers (DVR) are by and large used to moderate organization voltage unsettling influences and keep consistent voltage esteem between load terminals for a short and restricted span because of restricted energy storage spaces. Notwithstanding, this paper's proposed (DVR) framework constrained by the versatile organization fluffy surmising framework (ANFIS) regulator can make up for delayed power quality unsettling influences by incorporating a cross breed sustainable power framework (HRES) oversaw utilizing traditional Corresponding Indispensable (PI) regulator power the executives. This paper proposes a new (DVR) geography combined with a cross breed sustainable power framework (HRES) to take advantage of free and clean energy, comprising of a sunlight based charger, a PEM power device, and a battery stockpiling gadget associated through DC converters to a DC transmission, the got results from the reproduction cycle of the proposed DVR framework in the climate of MATLAB/Simulink showed the capacity to wipe out droop that surpassed 0.9 pu in a time of multiple min and grows that surpassed 1.2 pu in a period that surpassed one moment. In examination, the heap voltage's all out consonant bending THDv was decreased from 29% to 5%, and the source current complete symphonious twisting THDi from 30.25% to 2.79%.*

**KEYWORDS:** ANFIS.

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