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Patent Search

Invention Title	ARTIFICIAL NEURAL NETWORKS BASED VAR COMPENSATION OF INVERTERS CONNECTED TO DISTRIBUTED ENERGY RESOU
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Abstract:

ABSTRACT ARTIFICIAL NEURAL NETWORK BASED VAR COMPENSATION OF INVERTERS CONNECTED TO DISTRIBUTED ENERGY RESOURCE SYSTEM OF WIND TURBINE A ARRAY USING SVPWM TECHNIQUE A method for Voltage-Ampere Reactive (VAR) compensation in inverter-interfaced distributed energy resource (DER) systems, whic wind turbines and photovoltaic (PV) arrays, using an Artificial Neural Network (ANN). The variability of wind and solar power generation can cause significant power q making effective VAR compensation essential. The proposed ANN-based approach predicts the necessary VAR compensation by considering system parameters and conditions. These predictions are used to generate appropriate modulation signals through the Space Vector Pulse Width Modulation (SVPWM) technique for controlli inverters. The results from simulations and experiments show that this method effectively enhances power quality, improves system stability, and optimizes the perfo the DER system.

Complete Specification

FORM 2
THE PATENT ACT 1970 (39 of 1970)
&
The Patents Rules, 2003 COMPLETE SPECIFICATION (See section 10 and M.13)

2. I. TITLE OF THE INVENTION: ARTIFICIAL NEURAL NETWORK BASED VAR COMPENSATION OF INVERTERS CONNECTED TO DISTRIBUTED ENERGY RESOURCE SYSTEM WIND TURBINE AND PV ARRAY USING SVPWM TECHNIQUE

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3. PREAMBLE TO THE DESCRIPTION

View Application Status