

Comparison of the Electrical Engineering Software Programs ETAP 12.6 and PowerWorld Simulator 18 to Assist in Power System Design

For consideration in the category:

Technology Innovations Impacting Engineering and Engineering Technology Education.

Poster Session.

Biography

Kyle Nadolinski is the GridEd Student Innovation Board undergraduate representative for SUNY Buffalo State College, chair-elect of the IEEE Buffalo State College chapter, and student in the Electrical Engineering Technology: Smart Grid program. He will be sharing insight into the use of power simulation programs ETAP 12.6 Student Edition and PowerWorld Simulator 18 on power system design projects as a method to verify power system design calculations. Active interests include renewable energy, protective devices and laboratory based learning methods in power systems education.

Abstract

Power Systems design and engineering involves the successful calculation of individual component sizes and ratings while taking into consideration power system requirements and capacities. Electrical engineering simulation software provides a useful tool to verify the viability of both an individual component and entire power systems. In addition, the programs allow for efficient calculation of important processes relevant to the design considerations of a power system such as power flow analysis, short circuit current analysis and voltage drop calculations. The programs ETAP 12.6 and PowerWorld Simulator version 18, allow electrical engineering and electrical engineering technology students a method to build power systems in a one line diagram, specify relevant information and parameters, and then test their designs. Power systems will be built based on specified parameters, and then its operation simulated using the ETAP 12.6 and PowerWorld Simulator 18. Results and findings will be compared