



Electrical Engineering

New Mexico Institute of Mining and Technology

Designing an Intelligent DC-DC/AC Converter



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Abstract

This paper outlines the designing of an Intelligent DC-DC/AC converter. The project involves taking energy off a wind generator and solar panels and charging a bank of batteries. The converter must then take the energy from the batteries or input sources and convert it to 120 Vrms AC power @ 60Hz. The converter must also supply a 12 V DC line as well. A measurement system must then measure the voltage, current, frequency, and power factor supplied to an AC load. These collected values need to be saved to the Electrical Engineering server and then displayed on the Internet in real time. This paper will show the design, implementation, testing, and conclusion of the project.