

Advances in wind-energy technology have decreased the cost of wind electricity generation. Government requirements and financial incentives for renewable energy in the United ...

The simulation results prove that the new model of electric-wind vehicles will save power and allow the vehicle to continue moving while the other battery charges.

In this paper, we investigated the possibility of coupling a wind turbine to the architecture of a parallel hybrid electric vehicle to convert part of the vehicle's kinetic energy into electrical energy ...

With a 7 MW rated power and a 172-meter rotor, it features a medium-speed gearbox and a permanent magnet synchronous generator for optimized energy conversion, along with a full-power converter for ...

While traditional wind energy harnesses natural wind driven by atmospheric pressure variations and the Coriolis force caused by the Earth's rotation [1], this paper explores an ...

This paper presents a new strategy for wind energy harvesting to enhance the performance of the electric-wind vehicle (EWW). A wind turbine is ...

How Do Wind Turbines Work? Wind turbines work on a simple principle: instead of using electricity to make wind--like a fan--wind turbines use wind to make electricity. Wind turns the propeller-like ...

This paper presents a new strategy for wind energy harvesting to enhance the performance of the electric-wind vehicle (EWW). A wind turbine is mounted on the front of an electric ...

This range can be increased by installing a wind turbine to convert wind energy to electrical energy to charge the battery pack while in motion to recover the energy used and increase ...

Wind turbines, electric generators, control systems, and power electronic interface devices are the four main components of the WECS. This chapter makes an effort to provide a ...

Modern commercial wind turbines produce electricity by using rotational energy to drive an electrical generator. They are made up of one or more blades attached to a rotor and an ...

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