Design and Engineering of an Innovative Wind Turbine Generator

Lai, Rou-An

Due to the global warming, worldwide regions have suffered very serious climate changes. It causes a huge damage! We try to provide a solution to tackle this problem. We created the world's first coaxial stator-free power generation structure, an innovative power generation. It was designed and fabricated with the stator and rotor which spin in clock-wise and counterclockwise coaxially. Two sets of gear are used to drive the stator and rotor to turn in opposite sense separately to add up the relative angular velocity which is an important factor employed in the famous Faraday's Law of electromagnetic induction. The shape of the wind turbine blades was also redesigned to increase the sensitivity for catching the wind power in the lower range of wind velocity. This wind turbine generator is able to generate the maximum power, in a lower wind speed comparing to conventional generator, and in general 148~196% more power are generated and is applicable to any fluids for power generation. This new generator not only provides human beings with a better life but also curbs global warming and protects the planet more effectively. We believe we can change the world!