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(57) Abstract :
An electric vehicle-mounted aerodynamic wind turbine assembly (100) to harness wind energy for electricity generation is disclosed. The wind turbine assembly (100) includes two wind turbine boxes (102-1,102-2) mounted roof of the electric vehicle. Each wind turbine (102) has an aerodynamically designed body (104), and a rotor assembly (108) with blades to capture wind energy while the vehicle is in motion. A gearbox (112) and a generator (116) positioned inside the body (104) facilitate conversion of mechanical energy from the rotor assembly into electrical energy. The generated electricity is stored in a battery (106) connected to the turbines via electrical wires (104). Additionally, a hook (120) attached to bottom side of the wind turbine boxes (102-1,102-2) facilitates coupling and decoupling of the wind turbine boxes (102-1,102-2) on the electric vehicle.

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