4. Title: A multi-purpose charging station for e-rickshaws in rural areas

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Key words: E-rickshaws, Electric vehicle, Charging station

Domain: Electric Vehicle

Summary: A solar PV based charging station is developed for an electric vehicle to operate in different modes. A controller provided with the charging station compares and synchronizes grid voltage and charging station voltage. The controller generates an ON/OFF signal for the plurality of switches, which connect/ disconnect the grid with the local load and the charging station. The charging station utilizes the solar energy up to maximum extent. The charging infrastructure is built for the upcoming surge of e-rickshaws and electric vehicle. Further, it is highly useful in non-electrified rural areas.

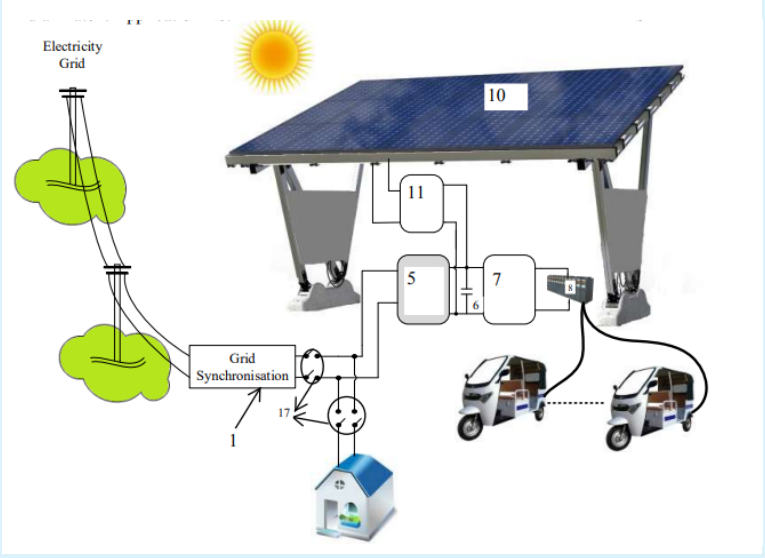

Diagram: schematic system configuration multi-purpose charging station for e-rickshaws

Advantages:

» Enables rural electrification apart from charging of e-rickshaws

» Creates opportunities for revenue generation for both consumers and utility in rural areas

Applications: Electric vehicle for rural areas

Scale of Development: A prototype charging station is developed and validated at laboratory scale.

Technology Readiness Level: 4

IP Status: Indian Patent Application 201711044219