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## **Solar fed bridgeless converter based synchronous rectification in electric vehicle**

**K Porkumaran**

Dr N G P Institute of Technology, India

One of the most critical issues for the environment today is pollution generated by hydrocarbon combustion which is one of the main sources of power for transportation. Full electric vehicles (EV) are rapidly advancing as alternative power trains for green transportation. Currently in HEVs and EVs, a dual-voltage power system is present which is convenient to transfer energy between the two voltage systems. In proposed system both traction and auxiliary power converters is represented by the highly efficient management of the high voltage DC bus by the battery pack which can range between 200V and 800V, according to the power of the electric motor. The solution is based on two switching converters linked through a high frequency transformer and it is able to achieve efficiency values higher than 90% over a wide load range at a reasonable cost. The efficiency and reliability of the system are improved with this proposed idea and also can effectively reduce the current ripples and voltage ripples. In this proposed work (Solar Fed Drive) i.e. a 500 Watts BLDC motor is used as the drive motor for our vehicle application. It has advantages in terms of cost, flexibility and efficiency. The proposed model and its controlling strategy are analyzed and designed by using LabVIEW.

porkumaran@gmail.com