



Dual battery management system with wireless and solar charging

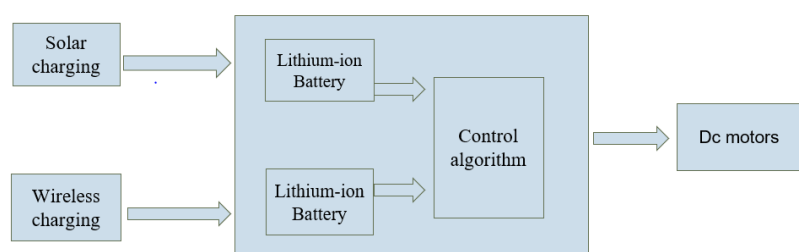
Jasper Joshuva A(20BEE1136), Rohan B(20BEE1169), Rishikumar N A(20BEE1010)

Objective:

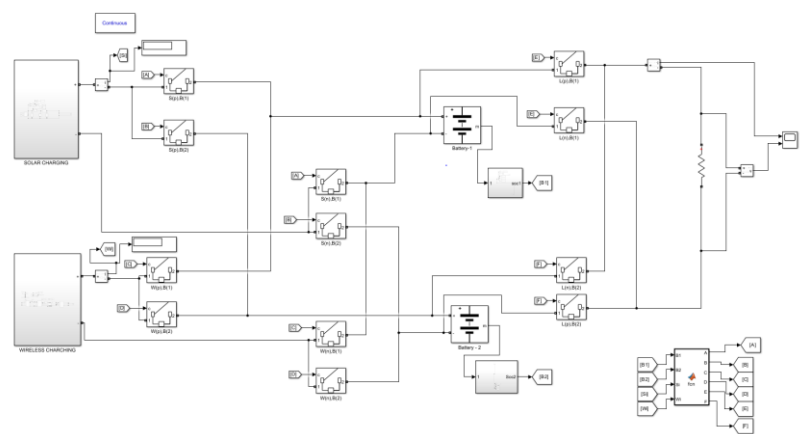
The primary objective is to innovate EV charging system utilizing solar power and wireless technology with underground coils for continuous charging while vehicles are in motion. Eliminating the need for vehicles to stop for charging, revolutionizing the electric vehicle travel experience and demonstrating a cost-effective solution, reducing the overall travel expenses by replacing traditional fuel with electricity.

Circuit/Block Diagram:

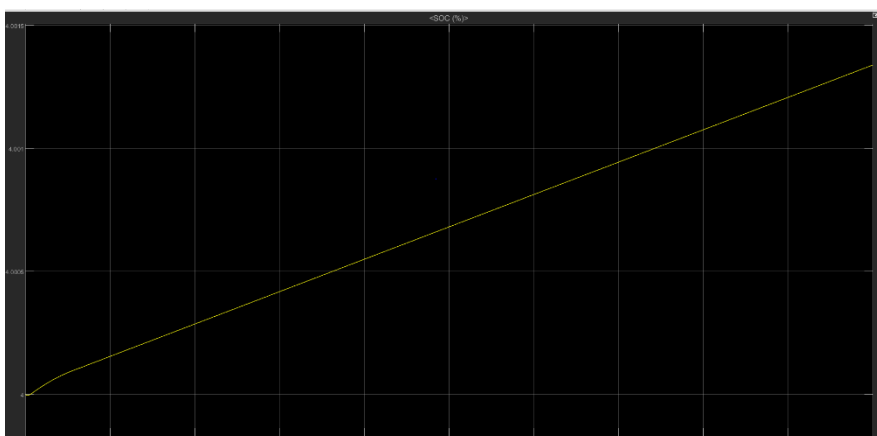
Block diagram:



Simulink Model:



Output Images/Simulation Results:



Summary:

It is obvious that environmental and energy-related challenges make vehicle electrification necessary. Compared to wired charging, wireless charging offers a number of advantages. The basis for EV mass market acceptance, regardless of battery type, will be laid when highways are electrified with wireless charging capabilities and the car getting a in-motion solar power converter replacing the conventional charging stations. In summary, this design demonstrates the eventuality of wireless charging system with renewable energy integration in EV charging systems, leading to a more sustainable and effective future for the transportation assiduity