

The Electric Vehicles (EVs) are recently increased and become commercial. In MATLAB, their equivalent electrical circuit implemented using Simulink field. Academic and institutional researchers are producing hard efforts towards exploring different possible ways of charging vehicles, especially the wireless system with achieving a fast, reliable, and safe way. To evaluate the output and input power by COMSOL, the frequency and number of turns of coils are varied and draw the results are evaluated by MATLAB to get the optimum value of frequency and efficiency. Accordingly, wireless charging is essential as a preliminary stage for the dynamic charging for the movable vehicles. This project is presented to design a prototype for wireless charging system based on inductively coupled power transfer technique. The modeling includes two systems that are represented in MATLAB and COMSOL programs.