

EV Charging Station with Solar Base (RFID)

Mr. Anand Shahaji Gaikwad¹, Mr. Saif Irfan Pardeshi², Prof. P. R. Upasani³

Students, Bachelor of Electronics & Telecommunication Engineering^{1,2}

Guide, Bachelor of Electronics & Telecommunication Engineering³

Annantrao Pawar College of Engineering & Research, Pune, India

Abstract: *Electric vehicle is a new and upcoming technology in the transportation and energy sector that has many advantages in terms of economic and environmental aspects. This study presents a comprehensive review and evaluation of specialized battery chargers and charging stations for various types of electric vehicles and their associated equipment. Commercial and prototype electric vehicles are compared in terms of electric range, battery size, charger power and charging time. Different types of charging stations and standards used for charging electric vehicles are outlined and the impact of electric vehicle charging on utility distribution systems is also discussed.*

Keywords: Battery charger, charging station, electric vehicle, standards

REFERENCES

- [1] Maria Carmen Falvo, Danilo Sbordone and I. Safak Bayram, Michael Devetsikiotis, "EV Charging Stations and Modes: International Standards", 2014 International Symposium on Power Electronics, Electrical Drives, Automation and Motion
- [2] Michail Vasiladiotis, Alfred Rufer, "A Modular Multiport Power Electronic Transformer with Integrated Split Battery Energy Storage for Versatile Ultra-Fast EV Charging Stations", IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS 2013.
- [3] Qin Yan, Bei Zhang, Mladen Kezunovic, "Optimized Operational Cost Reduction for an EV Charging Station Integrated with Battery Energy Storage and PV generation", IEEE Transactions on Smart Grid (Volume: 10, Issue: 2, March 2019)
- [4] Revathi B, Sivanandhan S, Vaishakh Prakash, Arun Ramesh, Isha T.B, Saisuriyaa G, "Solar Charger for Electric Vehicles", Proceedings of 2018 International Conference on Emerging Trends and Innovations in Engineering and Technological Research (ICETIETR) 2018 IEEE.
- [5] Wajahat Khan, Furkan Ahmad, Mohammad Saad Alam, "Fast EV charging station integration with grid ensuring optimal and quality power exchange", Engineering Science and Technology, an International Journal 2018.