

R&D and Deployment of Electric Vehicle Charging Infrastructure in Korea: Progresses and outlook

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Abstract

According to Global EV Outlook 2016 released by the International Energy Agency, market share for EVs in South Korea was a paltry 0.2% in 2015. That makes it among the lowest in comparison with 15 other members of the Electric Vehicles Initiative international governmental forum. Recently, Korean government have made announcement and set a goal to promote the deployment of electric vehicles and EV charging infrastructures. Korea aims to have about 200,000 electric vehicles (EVs) and 50,000 PHEVs by 2020. The plan includes development of an EV battery with energy density high enough to more than double the travel distance on a charge to 400 kilometers. By 2020, high speed charging stations will become available at an average of one within a two-kilometer radius in the capital city of Seoul. In addition, 30,000 slow charging stations will be strategically located at about 4,000 apartment complexes nationwide. To meet the goals, KEPCO also established short- and long-term plans of EV charging infrastructure deployment and R&D activities on advanced charging infrastructure such as wireless power transfer technology, V2G and V2x networks. Progresses on EV charging infrastructure deployment and outlook of advanced charging technology RD&D will be presented.