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Green Power Generation of DC Voltage for Metro Based Cities

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Abstract : Nowadays demand for electricity is increasing enormously day by day. So, In this paper electricity supply system suitable for public transportation by renewable energy. In this system, solar cells are installed on the roof of the platform. EDLC (Electric Double Layer Capacitor) are installed at the station, and EDLCs are always charged by renewable energy. EDLCs are also mounted on the locomotive. When the locomotive stops at the station, EDLCs of the locomotive are rapidly charged from EDLCs of the station. The capacitor takes discharges from one station till the other station then it gets charge in the next station the process will continue. The Battery driven Locomotive developed by (Railway Technical Research Institute) Consumes the electricity of 2.5kwhr per kilometer. Assuming that interval between stations is 500m; a locomotive consumes 1.3kwhr to reach the next station. If we assume that locomotive arrives and depart every 10minutes, and locomotive are operated for 18 hours a day, the power generation capacity of 99,000kwhr is necessary at each station in one year. so we are trying this model paper in the small kit and inspecting whether this plan is possible to real life.