

Locomotive power supply system includes a battery energy storage system (BESS). In addition to this, it comprises a locomotive (1) equipped with units (3) for connection to the locomotive electrical system, which are connected with high-voltage cables (4) to two high-voltage terminals (2) located on the front walls of the locomotive (1). A railway flatcar (7) carrying a BESS container (8)— which is equipped with two high-voltage terminals (5) located on the front walls of the BESS container (8)—is coupled to the locomotive (1). In addition to this, the high-voltage terminal (2) and the high-voltage terminal (5) are located above the coupling device between the locomotive (1) and the railway platform (7) and are connected with a high-voltage cable (6). Rail cars (9) of the train are attached to the platform (7).