A Study of the Increase in Green-Energy Installation Rates and the Reduction Effects on Fuel Consumption in Small-Scale Energy Networks of the Japanese Syowa Base in Antarctica by Distributed Engine Generators



Fig. 1 Configurations of conventional electric power network and heating system at Syowa station



(a) Electric power network and heating system

Fig. 2 Configurations of future proposal model of a distributed power network of Syowa station



Fig. 7 The proposed microgrid



Fig. 9 Energy flow