

The invention relates to the technical field of power system operation and control, and discloses a method for analyzing and screening electricity consumption behavior of demand side users, comprising the following steps: acquiring original power load data, establishing a standard characteristic curve by using a competitive learning network, and identifying and correcting abnormal data segments accordingly; multi-dimensional feature extraction and weighting are carried out on the modified load data to construct a weighted matrix of users' comprehensive electricity consumption information, and the clustering algorithm based on local density distribution is used to divide it into electricity consumption behavior patterns. The comprehensive price sensitivity of users at the time of electricity price conversion is calculated and input into a multi-objective optimization screening model. By solving the model, the list of screened users who meet the optimal objectives of response cost and response effect and the suggested response load are determined.