

عنوان مقاله:

Generation Expansion Planning in Pool Market: A Hybrid Modified Game Theory and Particle Swarm Optimization

محل انتشار:

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خلاصه مقاله:

Unlike the traditional policy, Generation Expansion Planning (GEP) problem in competitive framework is complicated. In the new policy, each Generation Company (GENCO) decides to invest in such a way that obtains as much profit as possible. This paper presents a new hybrid algorithm to determine GEP in a Pool market. The proposed algorithm is divided in two programming levels: master and slave. In the master level a Modified Game Theory (MGT) is proposed to evaluate the contrast of GENCOs by the Independent System Operator (ISO). In the slave level, a Particle Swarm Optimization (PSO) method is used to find the best solution of each GENCO for decision making of investment. The validity of the proposed method is examined in the case study including three GENCOs with multi-types of power plants. The results show that the presented method is both satisfactory and consistent with expectation

کلمات کلیدی:

(GEP, PSO, Pool market, Modified Game Theory (MGT), Market Clearing Price (MCP)

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