

عنوان مقاله:

Reliability and Security Constrained Unit Commitment With Hybrid Optimization Method

محل انتشار:

مجله مهندسی برق مجلسی، دوره 9، شماره 1 (سال: 1394)

تعداد صفحات اصل مقاله: 11

نویسندگان:

Ahmad Heidari - *Department of Electrical Engineering, Malek-Ashtar University of Technology (MUT), Tehran, Iran*

Mohammad Reza Alizadeh Pahlavani - *Department of Electrical Engineering, Malek-Ashtar University of Technology (MUT), Tehran, Iran*

Hamid Dehghani - *Department of Electrical Engineering, Malek-Ashtar University of Technology (MUT), Tehran, Iran*

خلاصه مقاله:

This paper presents an advanced optimization technique to solve unit commitment problems and reliability issues simultaneously for thermal generating units. To solve unit commitment, generalized benders decomposition along with genetic algorithm to include minimum up/down time constraints are proposed, and for reliability issues consideration, a fuzzy stochastic-based technique is presented. To implement the problem into an optimization program, the MATLAB software, and CPLEX and KNITRO solvers are used. To verify the proposed technique and algorithm, two case studies that are IEEE ۱۴ and ۱۱۸ bus systems are implemented for optimal generation scheduling, and reliability issues. Finally, a comparison with other solution techniques has been given

کلمات کلیدی:

Benders decomposition, en, Fuzzy programming, Genetic Algorithm, Optimization technique, Reliability Issues, Unit commitment

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1749545>

