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The algorithm for mixed programming with upper bounded variables and its application to energy planning. (Chinese. English summary) Zbl 0565.90051

J. Xi'an Jiaotong Univ. 18, No. 4, 113-122 (1984).

The idea of linear programming with upper bounded variables is introduced for mixed programs. A new algorithm for mixed programs with upper bounded variables is developed, which improves Benders' decomposition method. The theoretical proof of the algorithm is given. By using this algorithm, a considerable amount of computing time and memory space can be saved. The new method has been applied to energy planning problems with good results.

MSC:

90C11 Mixed integer programming
90B99 Operations research and management science
65K05 Numerical mathematical programming methods
90C90 Applications of mathematical programming
90C05 Linear programming

Keywords:

upper bounded variables; Benders' decomposition; energy planning