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Valuation and Optimal Exercise Strategy of Electricity Swing Options.

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Electricity swing options represent a special kind of American-style path dependent power derivatives. Thus, valuation of a swing option is inevitably linked to the determination of an optimal excercise strategy up to the end of the option's exercise period. In cooperation with a major European power producer and trader, this project deals with swing option valuation by means of a special multistage stochastic programming approach: a software tool was developed and implemented which accomplishes the requirements of a trading department with respect to pricing accuracy, run-time behaviour and handling comfort.

mot-clé	energy, derivative pricing, electricity swing option, multistage stochastic programming, discretization
type	Projet de recherche appliquée
état	courant
Départ du projet	2003
informations additionelles	Valuation of Electricity Swing Options. Determination of optimal exercise strategy, combined with an efficient Delta-Hedging strategy. Assessment of profit-and-loss distributional information for risk management purposes. Graphical representation of relevant results.