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Optimization in the Energy Industry

Springer

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Optimization in the Energy Industry

Today, the optimization of production planning processes using IT and quantitative methods is a de-facto standard in the energy industry. The energy problem is challenging and one of the most important political and economical issues in the world. Governments face the problem how to adopt the system of "Cap and Trade." Especially, energy consuming industries, like steel, power, oil and chemical, are seriously confronted with this problem.

The book offers a broad in-depth overview reflecting the requirements, possibilities and limits of mathematical optimization and, especially, stochastic optimization in the energy industry. 22 chapters with world-wide origins illuminate the mathematical requirements based on practical experiences and provide an ideal insight into the energy world - from integration of wind energy, modeling of critical states in nuclear power plant cores and scheduling of hydroelectric power stations, over risk assessment in trading activities to various mathematical approaches.

ISBN 978-3-540-88964-9

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