



Volume 30, issue 3, October 2022

Special Issue: Essays on operations research in energy

Issue editors

Juan M. Morales & Salvador Pineda Morente

10 articles in this issue

[Essays on operations research in energy](#)

Juan M. Morales & Salvador Pineda

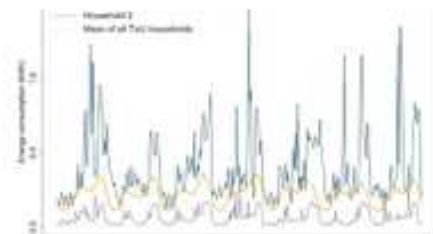
Preface | Published: 22 September 2022 | Pages: 427 - 429

[Optimal pricing for electricity retailers based on data-driven consumers' price-response](#)

Román Pérez-Santalla, Miguel Carrión & Carlos Ruiz

Original Paper | [Open Access](#)

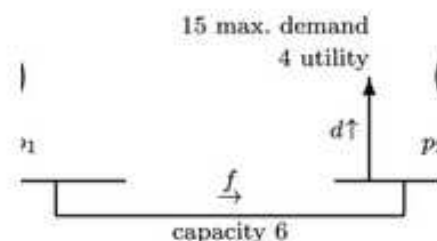
Published: 22 February 2022 | Pages: 430 - 464



[Solving certain complementarity problems in power markets via convex programming](#)

G. Constante-Flores, A. J. Conejo & S. Constante-Flores

Original Paper | Published: 28 March 2022 | Pages: 465 - 491

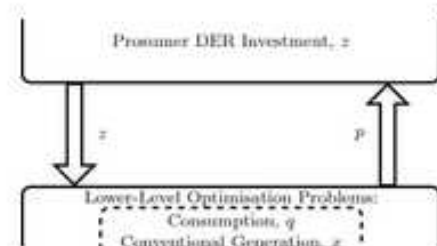


[Ambiguities and nonmonotonicities under prosumer power](#)

Afzal S. Siddiqui & Sauleh A. Siddiqui

Original Paper | [Open Access](#) | Published: 08 April 2022

Pages: 492 - 532

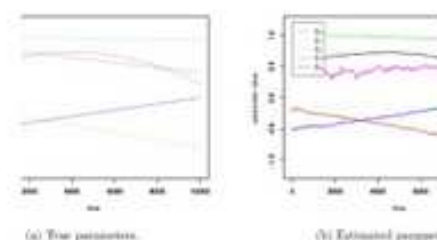


[Regression markets and application to energy forecasting](#)

Pierre Pinson, Liyang Han & Jalal Kazempour

Original Paper | [Open Access](#) | Published: 13 May 2022

Pages: 533 - 573

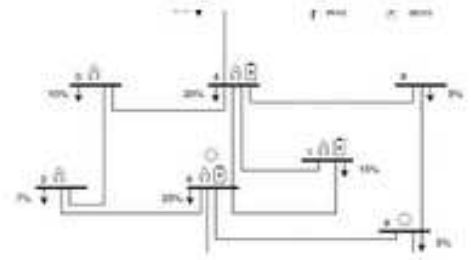


[The impact of convexity on expansion planning in low-carbon electricity markets](#)

S. Wogrin, D. Tejada-Arango ... A. Botterud

Original Paper | [Open Access](#) | Published: 08 June 2022

Pages: 574 - 593



[Integrating unimodality into distributionally robust optimal power flow](#)

Bowen Li, Ruiwei Jiang & Johanna L. Mathieu

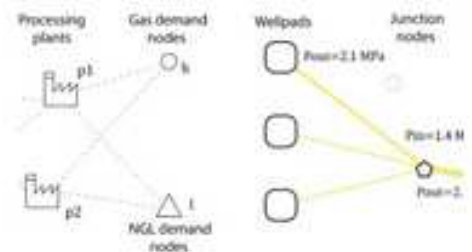
Original Paper | Published: 18 June 2022 | Pages: 594 - 617

Initialization: $k = 1, \nu_k = \{1\}^{|\mathcal{N}|}$, gap tolerance ϵ .
Iteration k :
Step 1: Solve the conservative approximation (11) using ν_j for all $j = 0, \dots, k-1$ and $\nu^k = \nu$ and obtain optimal solution x_k^* and objective J_k^* .
Step 2: Solve the relaxed approximation (9) using ν_j for all $j = 0, \dots, k-1$ and obtain optimal solution \hat{x}_k^* and objective \hat{J}_k^* .
Step 3: IF $|\hat{J}_k^* - J_k^*|/J_k^* \leq \epsilon$, STOP and RETURN x_k^* as optimal solution; ELSE GOTO Step 4.
Step 4 (Separation): Find worst case ν^* that results in the largest violation of (8) under x_k^* .
$$\nu^* = \arg\max_{\nu \in \mathcal{N}} \left\{ \sqrt{\frac{1 + \epsilon + \epsilon^2}{\epsilon}} [h(x_k^*)] - [h(x_k^*) - \epsilon(x_k^*)^T \nu] \right\} \quad (12)$$

[Recent contributions to the optimal design of pipeline networks in the energy industry using mathematical programming](#)

Diego C. Cafaro, Demian J. Presser & Ignacio E. Grossmann

Original Paper | Published: 05 July 2022 | Pages: 618 - 648

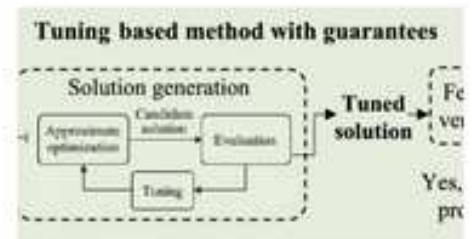


[Data-driven tuning for chance constrained optimization: analysis and extensions](#)

Ashley M. Hou & Line A. Roald

Original Paper | Published: 10 August 2022

Pages: 649 - 682



[Day-ahead market bidding taking the balancing power market into account](#)

Gro Klæboe, Jørgen Braathen ... Stein-Erik Fleten

Original Paper | [Open Access](#)

Published: 01 October 2022 | Pages: 683 - 703

