



Shaping and Integrating Future Electricity Markets with A High Penetration of Renewable Generation and Flexible Resources

Guest Editors:

Dr. Pandelis Biskas

Aristotle University of
Thessaloniki, School of Electrical
and Computer Engineering,
Power Systems Laboratory,
54635 Thessaloniki, Greece

Dr. Dimitris Chatziyiannis

Research Associate, Aristotle
University of Thessaloniki, School
of Electrical and Computer
Engineering, Power Systems
Laboratory, 54635 Thessaloniki,
Greece

Deadline for manuscript
submissions:

closed (31 December 2019)

Message from the Guest Editors

This Special Issue aims to address two issues: (a) the specific challenges arising from prospective cross-border balancing across a wide geographical region, and (b) optimal market design, so that new market actors and resources with different/unique technical and operational characteristics participate in the wholesale market. First, specific challenges arise from the prospective operation of market platforms (e.g., PICASSO, MARI, and TERRE) that shall be used for applying imbalance netting and for the exchange of balancing energy between neighboring control areas. Second, the market structure is gradually transformed from a heavily dominated, conventional-resources market to a market with widespread diffusion of renewables generation, a significant presence of storage facilities (e.g., pumped-storage hydros, batteries, electric vehicles, etc.), and demand-response resources acting as virtual generation. The emergence of new types of resources necessitates the incorporation of certain regulatory provisions and participation rules, along with new balancing/flexibility products, so that these resources are scheduled efficiently and attain economic viability.





energies



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Control and Optimization)

Contact Us

Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://twitter.com/energies_mdpi)